FEB.
27
1959

# PETROLEUM WEEK

A McGRAW-HILL PUBLICATION

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Price 50 Cents

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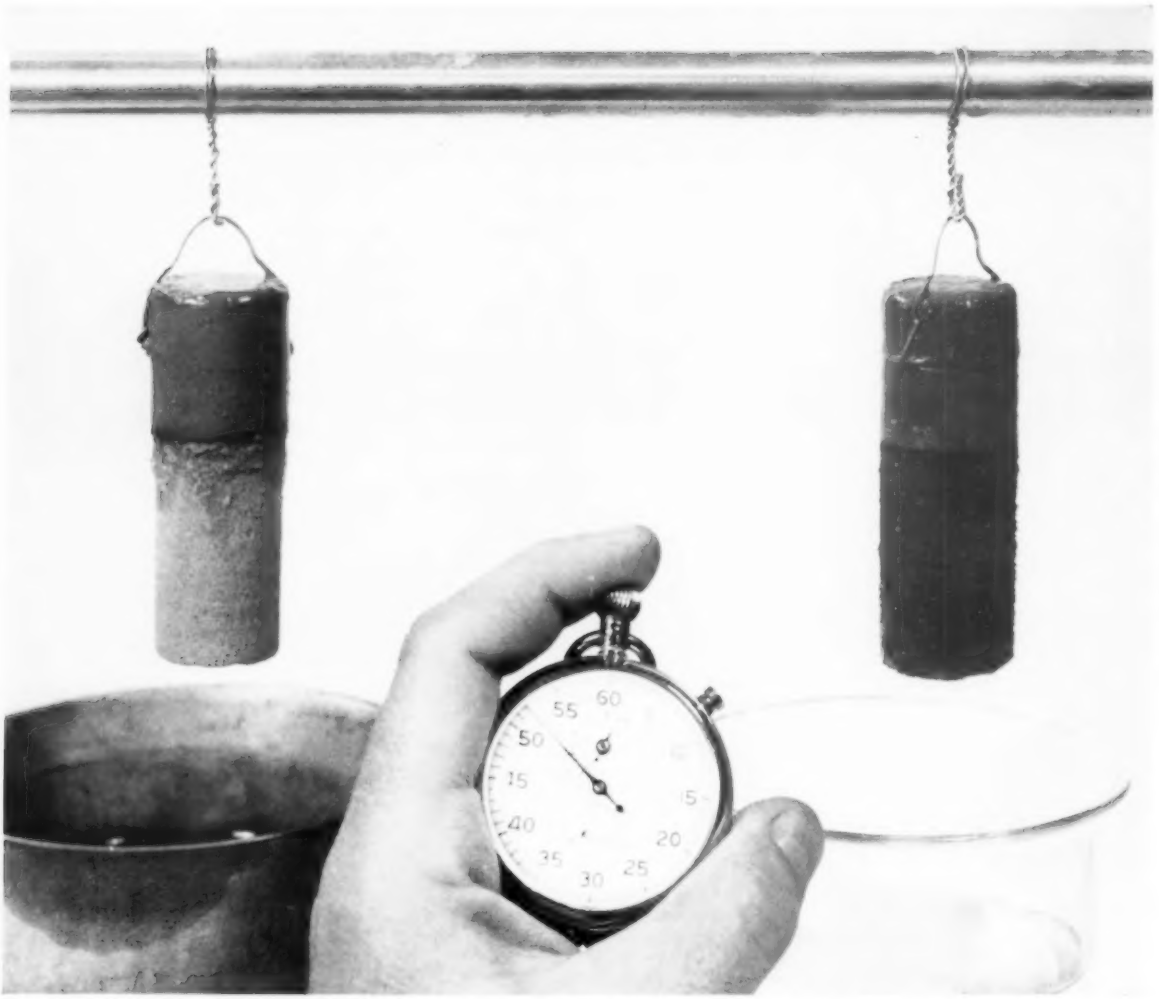

These cores were impregnated with drilling mud to demonstrate the clay-dissolving properties of Mud Acid. The core at the left has been partially immersed in Mud Acid while the one at the right was suspended for the same length of time in regular hydrochloric acid. Notice that Mud Acid quickly dissolved and disintegrated the filter cake while regular acid only discolored the mud on the core at the right.

## This Test Shows Why It Pays To Specify MUD ACID By Dowell For Mud Removal

As this test shows, Mud Acid actually dissolves important amounts of drilling mud. In addition, it is designed to complete mud removal by disintegrating and dispersing filter cake.

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While Mud Acid has been especially successful in low-solubility formations, its use is not limited to such applications. It has been used—both as a wash and a spearhead—in high-solubility limes or dolomites. There are no sharp limits to where Mud Acid by Dowell can be used successfully.

Mud Acid has been extremely successful in removing drilling mud from the vugular Ellenburger. Results are frequently so good that further treatment is not necessary.

Let your Dowell representative tell you about Mud Acid and its application to your well problem. For special conditions, Dowell also offers two other mud removal agents. For prompt service or detailed information, call the Dowell station nearest you. Or write Dowell, Tulsa 1, Oklahoma.

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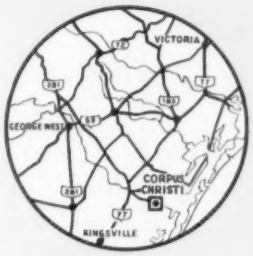


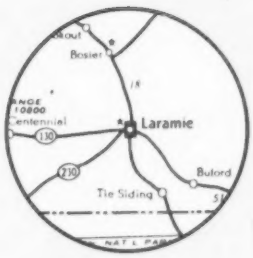


# IT'S SPRING AND MAGIC CIRCLES ARE IN BLOOM

**To help you sell more service station products**

This month Ethyl begins a brand-new Magic Circle advertising campaign—broader and more intensive than ever before. Designed to promote the fun of pleasure driving, it will run from early Spring right on through the good driving weather of the Fall.

There will be more than 60 Magic Circle advertisements in this new series. You will be seeing them in LIFE, LOOK, SATURDAY EVENING POST, SUNSET, SPORTS AFIELD and in Sunday supplements all over the country.

This campaign marks the fifth year of Ethyl's Market Expansion effort and has but one aim—to help you sell more gasoline and other service station products.

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**ETHYL CORPORATION, New York 17, N. Y.**

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DEPT/Opinions

# Views That Make News . . .

"There are four important things the public should know about depletion.

"First, it applies only to income from production of crude—not to income from other oil industry operations.

"Second, it is given because the producer who sells a barrel of oil is selling part of his capital.

"Third, it is in no sense a tax loophole.

"Fourth, thanks to it, this nation has been able to build a vigorous, forward-going domestic oil industry."

—NEW ALBANY TRIBUNE
*New Albany, Ind.*

"This is an unusual industry. Even a change of 1% to 2% in conditions —demand, and so on—can cause the whole situation to shift. That isn't true of most industries."

—GEORGE F. GETTY II
*President*
*Tidewater Oil Co.*

"You can't regulate one little piece [marketing] alone."

—JOHN D. KING
*Vice-president, Marketing*
*Cities Service Oil Co.*

"We buy our gasoline from DX refineries just as any other jobber. . . . If I do not show a profit from marketing operations in 1959, I will be looking for a job on Jan. 1, 1960."

—STANLEY D. BREITWEISER
*Executive vice-president*
*DX-Sunray Oil Co.*

"Oil progress is not inevitable. Petroleum got where it is today by giving mankind a better value. Its place in the future energy requirements of the U.S. will depend on the ability—and the will—of oil men and governments everywhere to continue to give better values."

—THOMAS W. PHELPS
*Manager, economics dept.*
*Socony Mobil Oil Co.*

"Russia's greatest steel production asset of the moment is the unshakeable determination of management and workers to make Russia the biggest and best steel producer in the world."

—JAMES B. AUSTIN
*Vice-president*
*U.S. Steel Corp.*

"The United States is steadily losing markets. This is not a result of lack of productive capacity . . . .

"The reason lies in costs alone. Because of high lease costs, high taxes, high exploration costs, high production costs, and chiefly based on high labor and tax costs, it has become almost prohibitive for the domestic oil producer to compete for markets."

—RICHARD W. HILLYER
*Vice-president*
*Ralph H. Cummins Co.*

"The problem for the United States (and the world) is to find a substitute for internal combustion use in automotive transportation.

"The solution of the problem of future transportation on the surface of the earth is of enormously greater importance than the problem of space travel."

—EUGENE AYRES
*Gulf Oil Corp.*

# . . . and Letters

Dear Sir:

Your "Inside Slant" [PW—Jan.30 '59,p3] reflected astute understanding of a major industry problem. There is no question about the producer being in a squeeze, with fewer producing days and lower field prices.

Your last sentence addressed itself to the crux of the problem. The only real solution is "consideration . . . to costs," and I assume you meant reduction in the costs of finding and producing crude oil.

As long as we have 40-acre leasing competing with 10,000, 20,000, or even 40,000 b/d wells, there will be a continuingly greater cost disparity. Artificial means of equating this difference will never be entirely satisfactory.

Surely the day must come when we will unitize field development as well as recovery. Many domestic reserves could have been more economically developed with 160- or even 320-acre well spacing. With commensurate allowables, there would be a significant reduction in both capital and lifting costs.

DAN M. KRAUSSE
*Cosden Petroleum Corp.*
*Big Spring, Tex.*

PETROLEUM WEEK *will publish reader comments each week. Address letters to LeRoy Menzing, Editor,* PETROLEUM WEEK, *330 W. 42nd St., New York 36, N. Y.*

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## INSIDE *Slant*

ELIMINATE DRY HOLES

If it weren't so serious, even tragic, this would be one of the best "oil jokes" we've heard in a long time.

Recently, a certain independent producer was pleading his justification for a price increase in his gas before the Federal Power Commission.

The purchaser of the gas had agreed to the new price, and the independent felt he could present a good case by showing it cost him more to find and develop the reserves than the price he was receiving for his gas.

One of the big—and certainly not odd—items of justification was the money he'd spent drilling what resulted in dry holes in the vicinity of the reservoir. This item totaled several million dollars.

At this point in his testimony before the FPC examiner, the independent was asked, in effect:

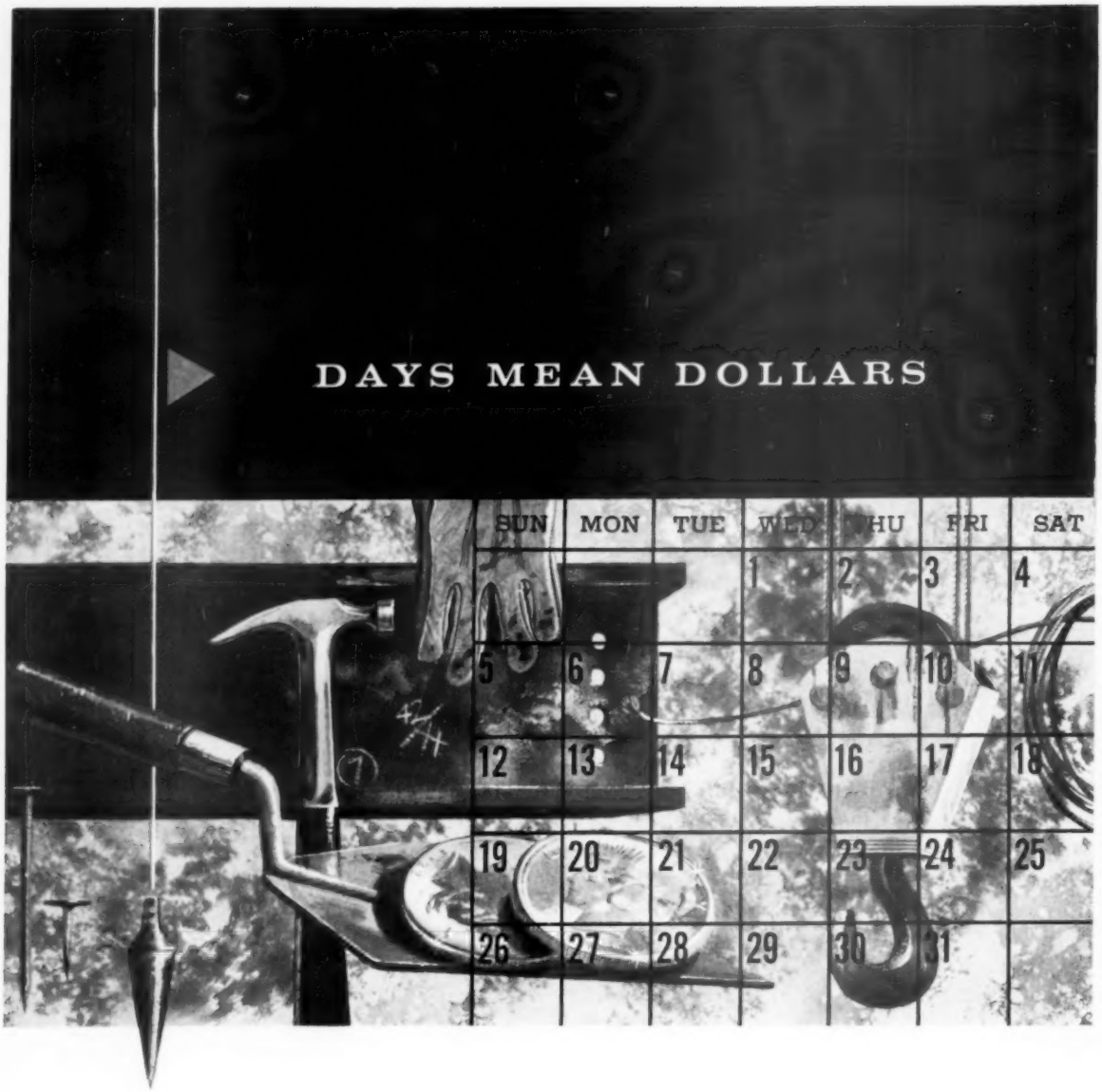
"Why did you spend this money to drill dry holes?"

The obvious implication: It's rather stupid to drill dry holes.

It's just another link in the chain of evidence showing that people in government who handle petroleum know little about it.

Tragic, isn't it?

LeRoy Menzing
EDITOR

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# 60-Second Summary / WHAT'S HAPPENING IN OIL

February 27, 1959

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**Interest in offshore lands still runs high. That is evident by producers'** bids of $43.7-million in bonuses for 66,938 acres at Louisiana's first offshore sale in three years. Bidding for onshore acreage was much less spirited. . . . p. 8

•

**Don't overlook the state legislatures.** Almost every one is meeting this year, and the big goal is to increase state revenues. In addition to tax hikes, there are a wide range of other proposals which would affect oil. . . . p. 7

•

**A supplier cutting prices in one area may have to make similar reductions everywhere.** That's the substance of an FTC examiner's ruling against Pure Oil Co. . . . p. 10

•

**Foreign marketing "positions" have an advantage over producing ventures** since oversupply has forced crude prices down and some costs are up due to higher taxes. . . . p. 9

•

**Kentucky's Green County continues to be a leading drilling area, with about 200 rigs running.** Some 700 wells now produce 22,000 b/d of high-gravity crude. . . . p. 14

•

**Some gas transmission firms talk of 42-in. lines.** But there may be a stumbling block: Construction costs are estimated at a minimum of 25% over 36-in.-line costs. . . . p. 34

•

**Shell Oil of Canada has a new technique for minimizing corrosion from sour gas-condensate.** It involves proper selection of materials and use of inhibitors. . . . p. 18

•

**Tanker fueling is being speeded by the use of a mobile bunkering blender.** The blender also reduces the need for bunker station tankage and pumping equipment. . . . p. 36

•

**Oil exploration in Bolivia is gaining momentum.** The search is being pushed into new areas by 20 private firms, which hold interests in 28-million acres of oil rights. . . . p. 38

•

**Sun Oil is having a computer designed specifically for process control.** It figures this "fresh approach" is better than an attempt to modify a computer designed originally for entirely different purposes. . . . p. 28

•

**Service stations are increasing their share of total retail sales.** In 1946, for instance, the percentage was 4.9%. But last year it was almost 8%. . . . p. 41

# Up to the Minute / SIGNIFICANT LATE NEWS

February 27, 1959

**Two Supreme Court decisions this week gave new answers to old problems:**

• **When, if ever, can a state tax imported raw materials?** The court majority's answer: When the material is put to use it becomes subject to the same tax as similar domestic material. And the court interpreted "use" to apply to materials still in storage, provided that the storage is obviously a step toward actual processing.

This does not mean a state can tax imports as such. But at the same time, it does mean that imported raw materials cannot "escape" such state levies as personal property taxes simply because they are imported.

• **Can a state corporate tax be applied to sales in that state by an out-of-state firm?** The Supreme Court says it can. For instance, if a firm in New Jersey makes 30% of its sales in, say, New Mexico, it is subject to the New Mexico corporate tax on that 30% whether it has any office in the state or not.

•

**Oil tax experts are weighing the impact the Supreme Court's decisions may have on the oil industry.** First consensus: The rule on imports taxes probably will have to be clarified on a case-by-case basis to determine just when a state tax can be applied to a specific material.

**The rule on state corporate taxes may have considerable impact.** It tends to subject companies doing interstate business to more taxation. At the very least, it is likely to involve greatly expanded bookkeeping and accounting to determine just what proportion of a company's sales is taxable in each state where it operates. And it may encourage the 15 states that do not have corporate taxes to begin such taxation.

•

**The issue of whether maritime unions can boycott "flags of convenience" shipping is heading for a court trial.** A judge, who earlier had ruled against a plea by tanker operators for a temporary strike injunction, held this week that he would not dismiss without trial their request for a permanent injunction.

•

**There will be no ruling on the federal-state offshore dispute before October.** The Supreme Court this week set a hearing on the case for Oct. 12.

•

**Many drilling crews are going to get a 5% wage hike.** Several of the larger drilling contractors have announced the increase, effective Mar. 2.

•

**Another proposal to hike taxes on natural gas in Texas is in the works.** It would be a levy of 2¢ per 1,000 cu. ft. of gas produced under long-term contracts. The bill is being drawn by State Rep. George T. Hinson as a possible alternative to the "severance beneficiary" bill he had introduced earlier in line with proposals made by Gov. Price Daniel.

# Oil Is a Target in Many States

**As if keeping pace with Congress wasn't enough, oil firms have to stay alert to proposals being made in state legislatures which could have a big impact on the industry.**

**A multitude of bills that would affect the oil industry directly or indirectly are flooding into state legislatures.**

These proposals cover a wide range: gasoline tax hikes, special-fuels use taxes, tax exemptions and refunds, severance taxes, pollution control, control of marketing practices, ton-mile taxes, diversion of highway funds, outdoor advertising rules, and so on.

Many of the proposals will get scant consideration. Others, particularly those pushed by special-interest groups, will make more headway. In any case, it creates a three-ring circus for the industry, the company, or the individual trying to keep posted on what the various legislatures are doing.

**Most of the proposals that will get the greatest consideration are those that would create more revenue for the states.**

Many states are in a serious financial squeeze, and are desperately seeking new or enlarged sources of revenue.

**A hike in the gasoline tax is being considered in many instances.** One state, New York, has already increased the tax, and tax-hike proposals have been introduced in ten other states: Arizona, Arkansas, Connecticut, Massachusetts, Missouri, Montana, Oregon, Washington, West Virginia, and Wyoming.

In the case of Wyoming, however, the tax hike has already been killed.

A move to hike the gasoline tax may develop in as many as eight or ten other states as the legislatures get farther along in their sessions, and as other tax proposals run into stout opposition.

**The diversion of gasoline taxes to nonhighway uses has become a lively issue in some areas.**

Although more than half of the states have statutes prohibiting diversion, many other states drain off part of the fuel tax revenue for other purposes.

The American Petroleum Institute recently issued a study calling attention to the network of "ghost" roads through the nation. "Ghost" roads, it explained, are roads that highway users paid for in gasoline taxes and motor vehicle fees that were never built because the money was used for other purposes.

The net result over a 23-year period, API says, has been that for every six miles of roads built, one mile was lost because of diversion of funds.

Currently, constitutional changes to prevent diversion have been introduced in two states—Connecticut and Delaware.

Meanwhile, however, two other states—Georgia and North Dakota—are considering repeal of present anti-diversion regulations.

**Special exemptions from gasoline tax payments also create a problem.**

Virtually all states already have provision for exempting or refunding taxes on fuel for farm use and certain other off-highway uses.

There is a gradual tendency to extend these exemptions. For instance, several states are considering proposals to exempt motor fuel used by local transit systems.

Other bills would exempt (or refund) tax payments when the fuel is used in motorboats or in corn shellers, or is used by a municipality or by a volunteer fire department.

Considerable opposition to this

## Oil Man's Album

**Pumping by 'Remote Control' circa 1900**

**The use of a central source of power from which to operate several wells was begun in relatively early oil days. This Kern field (Calif.) scene is an example: The band wheel in the foreground rotated back and forth, tugging at lines that ran through pulleys strung from poles to the pumping jacks at the wells.**

***(No. 24 in a Petroleum Week series.)***

growing trend of exemptions and refunds is developing, particularly in states where gasoline tax funds are diverted to nonhighway uses.

The critics point out that in such cases, users who are exempted escape paying their share of general, nonhighway state programs. For example, in a state that uses a portion of the gasoline tax revenue for schools, those exempt from the tax would be escaping some of the cost of the school program.

**There are other bills, particularly in producing states, that may affect the oil industry even more directly than the gasoline tax.**

In this category, the severence tax is the most common. New or increased taxes of this type are already being considered in at least six states: New Mexico, Utah, Texas, Washington, Kansas, and West Virginia.

**In Texas, several proposals affecting the oil and gas industry are under study. Most of them are aimed at increasing the state's revenue.**

One of the proposals made by Gov. Price Daniel is for an "emergency" increase of $14-million in corporation franchise taxes, plus a "regular" revision of rates which would boost the take from interstate corporations by $15-million.

The governor also is recommending an abandoned-property law, under which the state would get all cash and property held for owners missing more than seven years.

Again, the oil industry would be affected more than most others. Pipeline companies holding unclaimed royalty payments, and oil firms with unclaimed bonuses and rentals, apparently would be the biggest source of the "hidden" funds.

**Natural resources, long the big tax source in Texas, may be hit again.**

The governor proposes a long-range taxation program which includes a "severance beneficiary" levy on natural gas.

The state now collects 7% of the price of gas at the well. Daniel would add 3%, to be paid by the one "benefiting" from the use of the gas. This obviously is an effort to make out-of-state users bear the brunt of the increase, although producers would have to pay if the "beneficiary" could not be reached.

Observers of the Texas Legislature predict that a large tax bill of some type will be passed this year. And they feel that the franchise tax and some form of natural gas tax are the most likely to pass.

**Efforts are also being made in Texas to strengthen the state's antitrust law, in an effort to prevent "discriminatory" crude buying.** An Oil Imports Study Commission, appointed by Daniel, is sponsoring several such bills.

One would direct the Railroad Commission, to penalize by a reduction in allowables any company found to be favoring its own production—or found to be engaged in "excessive" importation of oil into Texas.

The theory behind this is that if the commission cut the allowable of an offending company, its Texas royalty owners would have a cause for legal action against the firm—and this would put enough pressure on the company to bring it into line.

Another bill would make subject to antitrust laws the "buffer" transportation corporations which some owners are said to set up to get around the present common-purchaser law.

**In California, the principal revenue proposal is a severance tax,** amounting to 2% of the gross value of crude, natural gas, and natural gas liquids.

Other proposals relate to smog control and a further tightening of the state's antitrust and fair trade practices. Proposals have also been made to prohibit price discrimination in gasoline sales, and to require the posting of octane ratings on station pumps.

**Highlights in other states include:**

**In ARKANSAS**—The legislature has passed a bill designed to allow oil men to deduct from their severance tax payments the amount spent on installing or connecting with salt-water disposal systems.

**In ARIZONA**—Majors and independents are split over spacing restrictions. A majority of the majors want 80-acre spacing, while most independents fear this would hamper exploration and development of Arizona's fledgling fields.

**In KANSAS**—One bill would strengthen the commission's power to enforce spacing rulings by reducing allowables when spacing is below the standard set in field orders. Another, which the state senate has already passed, would give the commission power to force pipeline firms to take gas from smaller wells now shut in in the Hugoton field.

# Louisiana Sale Draws High Bids

**The oil industry, which has had more than three years since the last lease sale to evaluate its offshore holdings in Louisiana, bid $43.7-million in bonuses last week for various tracts in State Zone 1.**

The substantial offshore bids were part of nearly $62-million in bonuses received by the state on offshore and adjoining onshore tracts. A total of 66,938 acres were leased in the offshore areas, at an average bonus bid of $652.21 an acre, for 37 leases.

In the inland areas—landward of Zone 1—91,274 acres were awarded to successful bidders for bonuses totaling $17.8-million, or an average of $195.25 an acre.

The total of all offers, including rejected bids and unsuccessful bids, amounted to $144.5-million (304 bids) at the state's first lease sale since a moratorium was declared last September.

State offshore leases haven't been offered in three years.

William C. Helis, Jr., chairman of the Louisiana Mineral Board, announced after the 14-hour bid-opening session that leasing would be resumed on a quarterly basis.

**Shell Oil Co. made the highest bonus bid, offering $6-million for a 2,000-acre tract in Eugene Island Block 7.**

Seven other bids were submitted for that tract (tract 7471, State Lease 3517), six of which were for more than $1-million each in bonuses.

Humble Oil & Refining Co. and Gulf Oil Corp. made a joint bid of $4.8-million for a 4,815-acre tract (Tract 7476, State Lease 3529) in the same general area. The CATC group—Continental, Atlantic, Tidewater, and Cities Service—was an unsuccessful bidder on the tract won by Humble and Gulf, with a bonus offer less than $3,000 below the winning bid.

Humble and Gulf also bid successfully with a bonus of $1,031,000 for 2,283 acres in the eastern half of Tract 7475, State Lease 3519. The companies bid a like amount successfully for 1,800 acres in the eastern portion of Tract 7486, State Lease 3529.

The CATC group won a 900-acre tract, Tract 7470, State Lease 3516, with a bid of $363,917.

On one offshore tract 13 bids were submitted, and 12 were offered on another. Those were mostly for small acreage with the winning bonus bids of upward of $800 an acre.

**Louisiana leasing officials attributed the high bonus bidding to competition for new leases following a long period of no leasing in the offshore areas.**

# The New Search Abroad Is for Markets

**Crude price cuts in the Middle East and the tax hike in Venezuela, which boosts costs, give "marketing positions" an advantage over producing ventures.**

**The impact of the crude price cuts in the Middle East is leading to greater emphasis on marketing opportunities abroad—instead of primarily producing ventures.**

That's the growing belief of many close observers. Their reasoning:

The surplus of oil is now so great that the largest international companies are in a race to maintain, or possibly increase, their volume of crude sales. The discounts of varying degrees that led to the 15-19¢-a-bbl. price break (PW—Feb.20'59,p19) provides proof of that fact.

The very nature of the price cuts leads some experts to speculate that Mideast prices may sift out to an even lower level before the present "round" of adjustments is over.

They note that Jersey Standard's Esso Export Corp., instead of following the 18¢-a-bbl. cut initiated by British Petroleum Co., switched to a flat posting on six Middle East oils, giving it some advantage over the BP price schedule. Most other companies that reduced prices held to a gravity-differential schedule.

**The oversupply of crude and the scramble for outlets isn't likely to change in the near future.**

If for no other reasons, the observers predict, the biggest international companies may find themselves under considerable pressure from the oil-producing nations abroad to step up production to offset the declines in revenues due to lower posted prices.

Such a competitive struggle by the largest, established international companies is bound to catch any newcomer to production abroad squarely in the middle, unless it already has an established market for its oil.

In short, some oil men say, a sound marketing position abroad has definite advantages over a producing position.

**In addition to the present poor world market and declining prices for crude, the tax hike in Venezuela poses a serious threat to the stability of the newcomer producers there.**

In fact, many observers believe that the combination of the price and cost squeeze may force some new entries to Venezuela to sell out.

For since those companies became producers there—with crude costs generally higher than the average of the established companies—their production costs have been increased by about 20¢ a bbl. by the income tax decree of last December.

Since Venezuelan producers have to seek export markets, some newcomers have had to sell crude below posted prices, with some offers reportedly being discounted as much as 80¢ a bbl.

This scramble for export outlets would be intensified by tighter import controls in the U.S.

Also, the price cuts for Mideast crudes are bringing pressure for deeper cuts in Venezuela than the 5-15¢-a-bbl. cuts made recently (page 44).

**The trend toward "marketing positions" abroad, in fact, has already started.**

The entry of some newcomers into Argentina and, in effect, the "reentry" of old timers there is a case in point.

Argentina has been faced with a mounting domestic demand and a short cash position for financing the needed search for oil within its own borders. Its "service lease contracts" offer the opportunity for contracting companies to explore for oil and to supply a ready domestic market.

The old-timers in Argentina, Jersey Standard and Shell, were caught in the bind of declining production on their own restricted acreage. Their affiliated companies were among the first to sign up under the new terms, which open the way to expansion of production in Argentina and a guaranteed domestic market.

Similarly, Indiana Standard's Pan American International Oil Co. was attracted to Argentina as a newcomer under a pact that provides a producing and marketing position.

**Several present producing countries in the Western Hemisphere may offer "marketing positions" within the next few years.**

The opportunities for U.S. oil-development capital in Mexico and Brazil are described as "excellent" by one prominent oil company executive.

Both countries have good potential reserves and a favorable outlook for domestic demand. But both lack development funds.

Mexico, many observers agree, has about "reached the limit" of its financial ability to continue an adequate development program.

Brazil, foreign observers say, is close to Mexico's position on financing oil operations.

**Possible entry into such nations most likely would be by contract, rather than concessions. But most oil men say such terms themselves are no stumbling blocks.**

The contract type of operation, one observes, would still allow "room to make money." And, even more important, the producing operation would be in areas with domestic markets.

***Sen. O'Mahoney says:***

# 'An Imports Law Is Needed'

**Sen. Joseph C. O'Mahoney (D., Wyo.) has introduced a bill to make oil imports control mandatory by congressional action—regardless of Administration action.**

O'Mahoney's bill would establish the legal framework for an "Oil Imports Administration" in the Interior Dept.

**The Wyoming lawmaker said last week he doesn't expect the President's oil planners to try a mandatory plan, but that even if one is attempted, he predicts it will be killed by court action.**

He predicted that importing oil companies would bring legal action immediately against any mandatory program ordered by the Administration on the basis of existing law.

"Injunctions would be sought," the senator said, "and I think the program would collapse."

He said the Administration realizes it is in a dilemma—that it knows the voluntary plan is a failure, and should know that a mandatory plan without specific congressional direction would not be sustained in court.

But as O'Mahoney was addressing the Senate, the President's Cabinet committee continued to work on its own solutions.

**O'Mahoney expects strong support**

**in Congress for mandatory legislation.**

"I have been saying for two years that mandatory controls of oil imports cannot properly be had except by legislation," he said.

**O'Mahoney's bill would establish controls on all crude and petroleum products, including residual fuel oil.**

His proposal does not specify a given amount of imports, but would leave that problem to the administrators. Imported residual oil, however, would be limited to 10% of total domestic demand for the fuel.

**All U.S. refiners would get an equitable share of imports, based on their refinery capacities** (not their runs).

Announcement of import quotas would be made in the Federal Register, with all quotas being set on a six-month basis.

O'Mahoney's bill also would divide imports between inland and coastal refineries "in such a manner as to maintain competitive conditions between integrated and independent companies."

**Under the proposal, coastal refiners would be limited to 40% of total imports except in special cases.** O'Mahoney believes such a division would avoid concentration of the refining industry in coastal areas.

The bill also contains special provisions for inland refiners and others who can prove the need for special treatment.

An appeal mechanism is also incorporated in the bill.

**The O'Mahoney bill would forbid transfer of quotas unless the Secretary of the Interior approved.**

Only the company granted a quota could import crude or products under that grant. Crude oil would have to be refined in the importer's plant.

**O'Mahoney tossed his bill up for consideration, and said he would welcome "perfecting amendments."**

He asked that his bill be referred to the Senate Interior Committee, where he is one of the ranking Democratic members.

**Some Washington observers doubt that O'Mahoney's bill has much chance**—partially because many congressmen prefer to leave the knotty imports problem in the Administration's lap.

# Just When Is a Price Cut Legal?

**The problem of the legality of price cuts has long been a vexing one. Now a new question has arisen to complicate the situation further for the oil industry.**

**A beer company case in a Chicago court soon may give an answer to a crucial gasoline marketing question.**

The marketing problem, caused by a Federal Trade Commission Examiner's ruling last week, is:

**Can an oil company legally narrow in one area the difference in price between its branded product and a private brand without a similar price cut everywhere?**

It is a new question for the oil industry, and casts a legal shadow over a long-standing industry marketing practice.

**The question came to the forefront last week when an FTC examiner ruled that Pure Oil Co. violated an antitrust statute by a pricing action of this nature in Birmingham, Ala.**

Examiner Robert L. Piper held that Pure's price-cutting in a 1956 Birmingham price war injured private-brand competitors, causing them a 25% loss of business.

Pure Oil, Piper said, thus was in violation of Sec. 2-A of the Robinson-Patman Act. The section reads in part:

". . . unlawful . . . to discriminate in price between different purchasers . . . where the effect of such discrimination may be substantially to lessen competition or tend to create a monopoly . . ."

**The examiner said Pure was not meeting competition, but aggressively intended to drive out private-brand competitors in the county.**

This was an application of some earlier court and FTC interpretation of the Robinson-Patman Act, holding that selective area price-cutting can only result in destroying the local competitor.

However, these earlier applications had been in cases involving other industries. This is the first time it has been applied to an oil practice of the type Pure used in Birmingham.

**Many marketers believe the examiner's ruling—if upheld—would have a catastrophic effect on gasoline marketing.**

However, the examiner's decision is subject to FTC review, and attorneys for Pure have already appealed to the full five-man commission.

In the past, FTC has upheld examiners in two similar orders, to Maryland Baking Co. and Anheuser-Busch.

But the Fourth U.S. Circuit Court of Appeals in Baltimore amended the Maryland Baking order. The company was forbidden only to cut prices in a single area below the price of competitors selling goods of like grade and quality—a marked softening of the effect of the FTC order. (Pure's price cut in Birmingham still left its price above the private brand.)

**If the Chicago court reverses FTC on the beer company ruling, the commission may ease the examiner's order on Pure Oil.**

In the case, FTC could not reasonably expect the courts to uphold the order against Pure, since the legal theory FTC is using is essentially the same in both cases.

**The examiner's order would forbid Pure from reducing gasoline prices in any market unless it "proportionately reduces its prices everywhere . . ."**

Piper would dismiss, however, charges that Pure discriminated in price among its own customers in Jefferson County, Ala., and that the company conspired to fix retail prices.

The examiner found that Pure offered the same price to all its dealers in the Birmingham area during the price war.

**In a recent decision against Sun Oil Co., FTC said the company violated the Robinson-Patman Act by cutting its price to one dealer in Jacksonville, Fla., without offering similar cuts to all its dealers in the same area.**

In both the Sun and Pure cases, the companies defended their actions on the ground of meeting competition. But in the Sun case, FTC said the company was not meeting its own competition—that Sun was meeting its dealer's competition.

In the ruling on Pure, the examiner said the company, by narrowing the competitive margin in Jefferson County, was not meeting but beating competition.

But one further question arises: If Sun follows FTC's dictum in Jacksonville, would it then be subject to the Birmingham ruling?

# What's New / IN THE INDUSTRY

**Domestic crude production in March will average close to the 7.2-million b/d level of February,** the allowables set in the major producing states now indicate. The basic permissibles in Kansas and Louisiana will remain unchanged in March, Kansas at 327,000 b/d and Louisiana at 868,325 b/d. The Louisiana allowable for March is up 4,704 b/d over the February figure, an increase to cover new production.

The Texas Railroad Commission, after one of the shortest statewide hearings in years—eight minutes—cut the March permissible 30,566 b/d from the mid-February quota. The new initial allowable of 3,138,565 b/d for the state is based on a 12-day producing pattern for most fields in the 31-day month, compared with 11 days permitted in the present 28-day month. Five of the largest purchasers—Humble, Texaco, Indiana Oil Purchasing, Atlantic, and Magnolia—recommended the 12-day schedule.

•

**A 2-mi-wide strip adjacent to Naval Petroleum Reserve No. 4 in Alaska is expected to be offered for leasing soon,** according to Sen. E. L. Bartlett (D., Alaska). The strip separates the reserve from public-domain land south of it in north-central Alaska. Bartlett and Rep. Ralph J. Rivers (D., Alaska) are joint sponsors of legislation to return all of the petroleum reserve to public-domain status to increase private exploration.

•

**Crude price shading continues in several areas of the southwest.** The Texas Co. has cut North Texas and Panhandle postings by 7¢ a bbl., meeting American Petrofina's cut in the former area and Phillips Petroleum's reduction in the latter. It makes Texaco's top posting $3.01 a bbl. in North Texas and $2.95 a bbl. in the Panhandle, with a 3¢-a-bbl. differential below 40-gravity.

In Oklahoma, the largest purchaser, Sunray Mid-Continent, reduced postings 3¢ a bbl. for sweet crude. The new top price of $3.05 a bbl. is now offered for about 325,000 b/d, while only 85,000 b/d moves at the old $3.08-a-bbl. level.

•

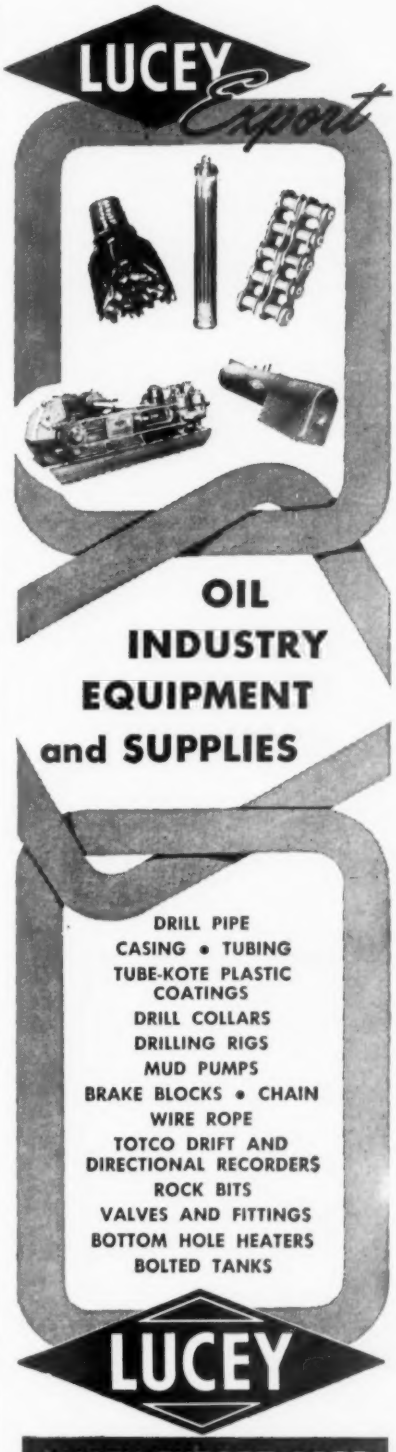
**Texas highway lands may be offered for mineral leasing for the first time on Apr. 7,** the date set for a sale of school land leases. The Highway Commission, which like other state agencies can set up a lease board under the chairmanship of the State Land Commissioner, owns about 200,000 acres of mineral rights, including 26,000 acres in producing areas.

**Leasing of the highway lands could lead to litigation,** according to the Texas Mid-Continent Oil & Gas Assn. and others, which have opposed the proposal. The reason is that the Highway Commission does not want any drilling on rights of way, "or so close as to endanger the traveling public." That would mean either permission for directional drilling from adjoining (non-state) property, or the possible "pooling" of state acreage with the adjoining private property.

The School Land Board's lease sale in April will include 32,124 acres in 20 counties.

•

**The first cargo of liquid natural gas to be carried by sea arrived in England last week.** The 2,000-ton cargo was carried without pressure at a temperature of minus 258F in the experimental ship, "Methane Pioneer." The vessel, owned jointly by the Gas Council of Great Britain and Constock International Methane, Ltd., is a prototype of larger vessels expected to be used in commercial service if continued test runs prove successful.

# Looking Ahead in Washington

McGraw-Hill
Washington
Bureau
February 27, 1959

**Sen. Estes Kefauver (D., Tenn.) now will try to have quick hearings —instead of no hearings—on S-11.** Kefauver's first plan was to toss his pricing bill immediately to the Senate Judiciary Committee, where he anticipates a tough fight. But after surveying the situation, he relented and decided once again to hold subcommittee hearings, starting Mar. 17. Kefauver hopes the hearings will consume only a few days, with mostly written testimony being filed. But foes of S-11 may try to slow the bill's consideration with lengthy hearings.

•

**A House subcommittee is planning a thorough technical look at the crowded radio spectrum.** This problem has troubled many petroleum users of industrial radio. Rep. Oren Harris, (D., Ark), chairman of the House Interstate Commerce Committee, has asked for $150,000 for the subcommittee study, which would be headed by Rep. John Bell Williams (D., Miss.). The tentative plan is for the subcommittee to assemble an expert staff of technicians to study in depth such problems as the division of spectrum space between government and nongovernment users, and the subsequent division among various classes of industrial and private users. Harris hopes to have the study completed in 1960.

•

**The treatment of taxes in determining natural gas rates is up for study.** The issue will go before the Federal Power Commission Mar. 17, when oral arguments start in a United Fuel Gas Co. rate case. An examiner ruled that United Fuel should figure its cost of service only after deducting percentage depletion and intangible well-drilling costs. But in another case, an examiner has allowed a company to omit depletion and intangible well costs when figuring rates. So the commission now must set some sort of policy on the question.

•

**The government is polling oil companies on whether they will help pay the costs of an oil shale atom blast.** The Bureau of Mines is awaiting answers from about 70 oil and chemical firms before deciding whether to proceed with this aspect of "Operation Plowshare." The companies are being asked whether they will pay half of the $2.5-million cost of the experimental nuclear test.

The Bureau of Mines also wants to know the companies' views on preceding the blast with a simulated, nonnuclear test, probably using TNT. The Atomic Energy Commission has indicated that an atom test could be held this year, but most observers don't think the program would move that fast even if the companies respond quickly.

•

**Interior Secretary Fred Seaton wants to keep Matthew V. Carson as oil imports administrator as long as possible.** Seaton highly praised Carson at a recent press conference and said he would oppose any effort by the U.S. Navy to put Carson back in uniform. Carson now is in his second year on the oil imports job, and could—depending on many factors—remain in his government post until his 20-year retirement from the Navy becomes possible in about two more years. Despite the headaches he has encountered, Carson has indicated a willingness to stay.

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Welcome to
GREENSBURG IN THE HEART OF KY.
IN GREEN COUNTY
We Are Looking for Industry
GREENSBURG JUNIOR CHAMBER OF COMMERCE

TRANSPORTS are now used by Ashland Oil & Refining Co. to haul crude, pending completion of a new 72-mi. pipeline as . . .

# Kentucky's Green County Play Is Still

**Heavy rains, freezes, and sudden thaws have taken some of the zing out of the fantastic Green County play in central Kentucky. Even so, about 200 rigs are currently active.**

Office and living space continue in extremely tight supply at Greensburg, the county seat, which lies on the east edge of the main producing area and about midway on a north-south line.

The town, with its 2,200 or so inhabitants, has been the focal point of activity since the play began about a year ago.

Lack of adequate building space has forced some suppliers to use "open sky" warehouses for storage of various drilling and production equipment.

Activity is still rolling along at a comparatively good clip, but a much stronger pace is expected as soon as drier weather sets in. The current weather has hampered activity by making much of the hilly terrain a muddy, equipment-bogging morass.

**Right now, about 700 wells are producing some 22,000 b/d of high-gravity crude, roughly one-third of the state's total production.**

The field has begun to take on a Y-shape, extending about 14 mi. or so from north to south, and roughly 3 mi. east-west on the base of the Y. Limits are still not fully defined.

About 90% of the 40-plus-gravity highly paraffinic crude comes from the field's north area. This area spurted after it was found that acidizing greatly increased natural production. The discovery that acidizing could help lower the very adverse water-oil ratio of wells in the area came when an operator attempted to step up production in a new well that had failed to produce oil in commercial quantities.

Discoveries are predominantly shallow, ranging from 400 ft. to 600 ft., and are principally in the "Blue sand," a dolomitic limestone of Silurian age (PW—Nov.21'58,p25).

**The area's most recent offshoot, in a section broadly labeled as Marshall Ridge Road, expands the field north to the edge of Taylor County.**

About 20 of the rigs now active are concentrated in this offshoot, which is near the end of the longer, right fork of the Y, which leans heavily to the right. Production from Marshall Ridge, which was opened less than three months ago, already tops 2,000 b/d.

A link-up of the main Green County field and the offshoot, about four miles northeast of the principal producing area, is indicated by several wells spotted between the two areas.

**Drilling is principally a cable tool operation. Over-all costs are low.**

Less than ten days are required for most completions, with the success ratio running about 4:1.

Some operators have been able to drill to the producing formation in one day by using rotary air drilling.

Average completion costs run between $5,000-$6,000, a factor which has helped lure all sorts of drilling newcomers to the area.

**Ashland Oil & Refining Co., as principal purchaser in the field, is trucking the crude north to Louisville for barge shipment to its refinery at Catlettsburg,** along the Ohio River in the extreme northeast corner of the state.

About one truckload every 12 minutes around the clock is leaving the area. Convoys of a dozen or more trucks are frequent. The company's purchases currently are running over 19,000 b/d.

**The truck transport "oil lift" will be eliminated in a few weeks, however, when Ashland completes a 20,000 b/d, 72-mi. pipeline from Greensburg to Louisville.**

The $1.7-million line is scheduled for completion by mid-March. The initial 40 mi. of coated and wrapped 6-in. line will tie into an additional 32 mi. of 8-in. line and end at the company's refinery in Louisville. This refinery has been used as a terminal, but now is being revamped to process a portion of the Green County crude. The remainder will continue being barged to Catlettsburg.

The line will include two pump stations. The first, at Greensburg, will have two 10,000-bbl. cone-roof welded tanks and a centrifugal pump driven by a 600-hp. electric motor, pumping at pressures up to 1,000 psi.

The second station, east of Hodgenville, will be fully automatic, with a similar 600-hp. electric drive and centrifugal pump. No tankage will be constructed at the second station, which will go on line when through-

BACKYARD DRILLING is commonplace in the area, as are . . .

OPEN SKY WAREHOUSES, with all sorts of material on hand.

# Spreading

put from Green County production tops 14,000 b/d.

No major river crossings are involved in construction of the line, which runs through Green, Taylor, Larue, Nelson, Bullitt, and Jefferson Counties. The 8-in. section bores under the Kentucky Turnpike near Lebanon Junction, with a 312-ft. section of casing in place under the four-lane toll road.

**The company has nearly 50 mi. of gathering lines in the area.**

About 8 mi. of this total are in the Marshall Ridge Road sector. Just last week, Ashland completed a 4-in. line to tie these facilities into the main field storage tanks at Greensburg.

This crude will continue being trucked to Louisville until the main line is completed.

Most of the 40 mi. of gathering lines in the main field are 2-in., 3-in., and 4-in. pipe. The main tank farm is in the north field, with an average daily turnover of three times the 7,000-bbl. total storage capacity.

A 10-in. line will lead from existing tankage on the north end to Ashland's new tankage at Greensburg.

**The oil play and the new pipeline have spurred leasing activity up and down the western flank of the Cincinnati Arch, major structural feature in the area.**

One unverified report is that a 50% working interest in half of a 30-acre plot was sold for $250,000. Another 60 acres was reportedly sold for $500,000. Both of these tracts are in the proved sections of the field. And 13 acres in an unproved section in the Marshall Ridge Road extension are said to have sold last week for $13,000.

Many of the large leases are being subdivided into 1- 5-, and 10-acre sections, which are being sold at "fantastic prices," according to one source.

**Salt water control, however, remains a major problem.**

The Green County field entered its first big production phase early last year in what is now the south area. The transition was marked by an odd reversal in liquid production on completed wells. The first wells made large quantities of salt water and then, as pumping continued, began to show good commercial quantities of oil.

The heavy production of salt water —as much as 1,000 bbl. of salt water to 1 bbl. of oil—has been the basic problem. The time it takes for initial water production to fall off has varied from as little as one day to as long as three months.

While control is still a matter of surface pool drainage, an increasing number of operators are planning reinjection disposal wells.

The pollution of rivers in the area led to a Green County grand jury indictment in December against 316 producers and landowners, as well as to a threat by officials to shut down all production if corrective steps weren't taken.

These actions have spurred the reinjection plans.

INITIAL SECTION of Ashland's pipeline to Louisville is carried down a hill on its way north. The 20,000 b/d pipeline will be completed within a few weeks.

# Velocity Logging Shows Big Gains

**Velocity logging has caught on at a rate that has surprised even the companies offering the service.**

The technique is still relatively new and is considered by many as being "in its infancy" (PW—Mar.7'58, p58).

Basically, it involves the emission and reception of sound waves by a downhole tool. The consequent log is used in a manner similar to electrical and radioactive logs, for determining location of possible oil-bearing formations.

As recently as 1956 and 1957, the tool was still considered experimental to a large extent, though field service was beginning.

Now the number of jobs being performed is climbing rapidly. For a time last year, the demand for the service reportedly outstripped the number of tools available in the field.

**Illustrative of the growing use of this tool is the fact that Schlumberger Well Surveying Co. performed some 1,800 velocity logging jobs alone last year with its "Sonic" log.**

This figure takes on added significance when compared with Schlumberger's estimate that only about 1,000 velocity logging jobs were carried out during a two-year span through 1956—many of which were only on an experimental basis.

Schlumberger first began running its Sonic logging tool in September, 1957. But the company had only two prototype tools in service at the time.

By December, 1958, Schlumberger was running such logs at the rate of 400 per month.

**The demand has prompted Schlumberger to plan on doubling the number of Sonic tools in the field.**

The company now has about 50 of the instruments in use, and is offering the service in all but one of its domestic divisions.

The company says it expects to equip its districts with about the same number of Sonic logging tools as microlog tools.

Schlumberger's tool is a modification of a two-receiver device developed and licensed to Schlumberger by Humble Oil & Refining Co.

**Seismograph Service Corp. also is increasing the number of velocity logging instruments, with three new units scheduled to go into service within a few weeks.**

SSC, which entered the velocity logging field early in 1954, now has nine domestic units in the field, and 18 in foreign operations.

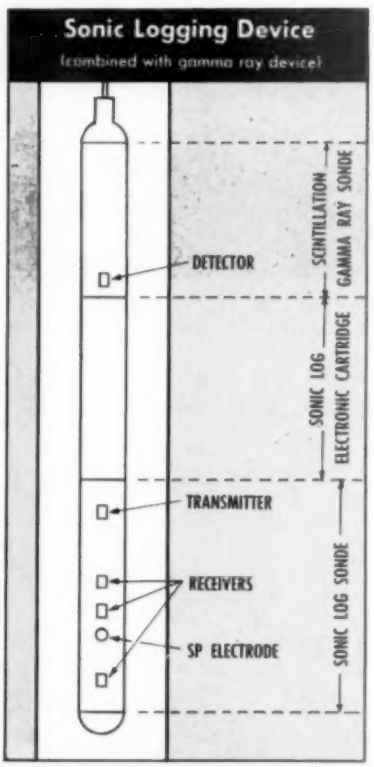
The company has been licensed to put into commercial application the Continuous Velocity Log (CVL) developed by Magnolia Petroleum Corp.

The original Magnolia patent covered a one-receiver sonde. Subsequent research by Magnolia led to the development of the superior two-receiver sonde, and additional modifications by SSC resulted in the downhole tool now being used.

An important adjunct to SSC's logging service has been the recent acquisition of Birdwell Surveys, Inc., which has been operating as a division of SSC since Jan. 1. SSC says that within the next six months, CVL will be added to the line of Birdwell services offered throughout the eastern U.S.

**Empire Geophysical, Inc., recently announced development of a velocity logging system giving five simultaneous logging records on one run of the tool** (PW—Feb.13'59,p29).

In use, the Empire VS Acoustic log has these features: single receiver Acoustic log; dual receiver Acoustic log, with choice of 1-ft., 2-ft., and 3-ft. spacing of receivers and switching in the hole; choice of accompanying self-potential (SP) or gamma-ray log; dual-receiver linear velocity curve; and integrated travel time.




**SOUND TRANSMITTER in Schlumberger's Sonic Log emits pulses at the rate of 10 per second.**

The announcement follows three years of development and testing of the instrument, which also is derived from the Magnolia system.

Empire has five sets of equipment, and averages from 20 to 25 jobs a month, according to Howard Itten, president.

**Velocity logging has features that are said to make it particularly applicable to certain types of problems.**

Its use for correlation purposes is one of the tool's strongest points.

It has been used not only to correlate subsurface information between wells in a single field, but also between fields.

In one instance, four North African fields were related through use of Sonic logs.

But, according to Schlumberger, the determination of porosity "is the outstanding quality of the Sonic log."

The device also is valuable in detecting gas in unconsolidated formations; in detecting fractures, at least in certain instances; and in the location of fault zones.

In sands of uniform porosity, the instrument can find gas-oil or oil-water contacts, as well, because of the difference in density between oil, water, and gas.

One aspect of porosity determination has been improved by the addition of an integrator that records interval travel time in milliseconds. By use of a calibration chart, average porosity for a given section can be figured by dividing the interval of time by the footage.

This is particularly useful in a fairly thick formation where the matrix velocity is uniform.

Temperature and, to a lesser degree, pressure, place limitations on continuous velocity logging, just as on any other type of log. Maximum operational temperature is considered to be 330F, although short periods at temperatures up to 350F are possible. All CVL Sondes are laboratory tested for pressures up to 20,000 psi.

There's no doubt, however, that the logs can be used at the maximum depths now being drilled. An SSC CVL unit was used in logging the world's deepest hole—Phillips Petroleum Co. No. 1-EE University—at 22,830 ft. But the CVL cannot be run in cased holes, nor in holes where no fluid column is present as in air gas drilling.

***Eliminate*** *high-pressure surges...*
***Fill*** *your casing automatically... and*
***Circulate*** *at any time while running-in with*

# BAKER
# CIRCULATING
# FLEXIFLOW

Now, not only can you fill casing automatically from the bottom while running-in, and protect low-pressure, permeable zones from damaging pressure surges – but you can also *circulate at any time.*

Baker "Circulating" FLEXIFLOW Fill-Up Collars feature a self-adjusting Flow Control Diaphragm that opens up (see Fig. 2) to relieve destructive pressure surges – as high as 5,000 psi – which tend to build up when casing equipped with conventional floating equipment is lowered in open hole. And then, when the rate of lowering is slowed down and pressure from below is reduced, this Flow Control Diaphragm closes down to prevent overfilling; see Fig. 3.

That's why Baker FLEXIFLOW Collars help prevent costly circulation losses . . . reduce mudding-off of producing zones . . . permit maximum recovery . . . and eliminate fracturing as a cause of primary cementing failure.

Surface filling is completely eliminated. Your casing fills *automatically* from the bottom *as it is run.* You can keep the casing moving, except for the short interval required to add and make up a joint.

In addition, you can *circulate at any time* while running-in. And a back-pressure valve can be brought into action for cementing by merely pumping a Bakelite Ball down the casing to the Collar; see Fig. 4.

Ask your Baker service engineer for more information about the successful Baker "Circulating" FLEXIFLOW Fill-Up Collar, and its companion, the Baker Model "E" Triplex Cementing Shoe, Product No. 136-E—a perfect combination for many "problem" cementing jobs.

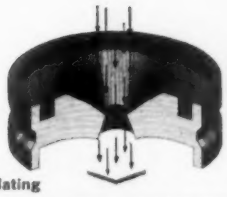


Fig. 1 — Circulating

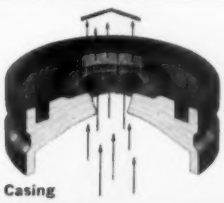


Fig. 2 — Filling Casing

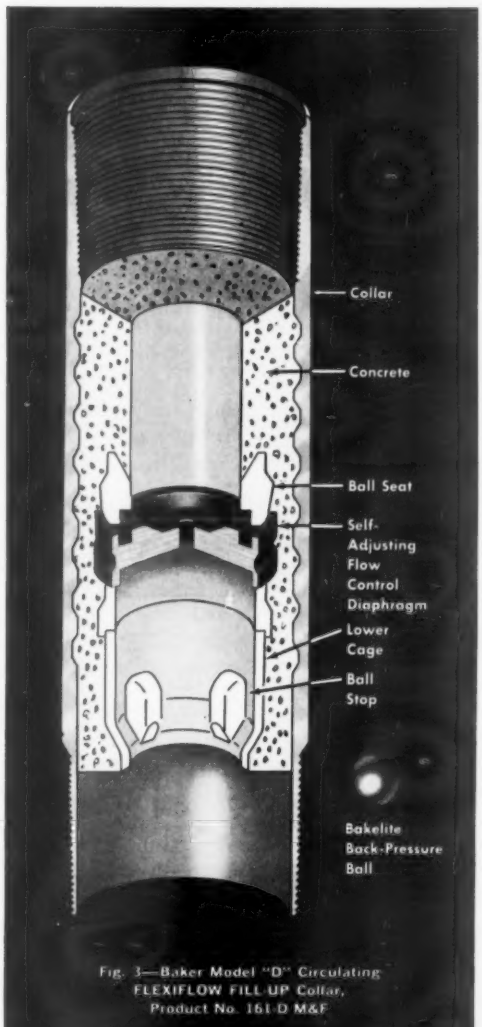



Fig. 3—Baker Model "D" Circulating FLEXIFLOW FILL-UP Collar, Product No. 161-D M&F

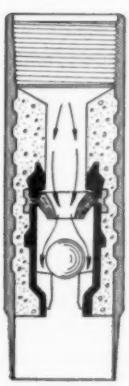


Fig. 4— Back-pressure ball dropped and pumped through hole in diaphragm.

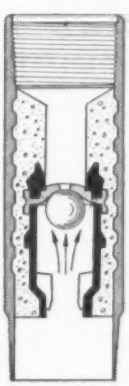


Fig. 5— Ball in position to provide back-pressure valve.

**BAKER OIL TOOLS, INC.**
HOUSTON/LOS ANGELES/NEW YORK

**BAKER**

# How to Control Sulfide Corrosion

**Shell Oil of Canada, Ltd., says it has test-proved techniques for minimizing corrosion of production materials in sour gas-condensate wells.**

In a report based on ten years of experience in handling such wells in western Canada, Shell says it has "been able to reduce to a very low value" the probability of failure of materials due to hydrogen sulfide corrosion cracking.

The report, released last week, was written by two of the company's chemical engineers—K. N. Wallam and V. P. Milo.

**This is Shell's approach, basically: Evaluate the severity of the environment through field tests, and then reduce the corrosion by correct selection of materials and design.**

Before making the field test, each alloy to be tested is graded as to its corrosion-susceptibility under known sulfide conditions in a severe laboratory test.

Then a specimen of the alloy is stressed to 120,000 psi., after which it is exposed to the well environment.

The exposure is made early in the life of a field, often during production testing of the field's first well.

Comparing the failure experience in the well environment to that of the standard environment in the laboratory indicates which materials may be best suited for the new field.

**Shell uses a water-soluble organic corrosion-inhibitor to protect the drill pipe during drillstem testing.**

The corrosion inhibitor is added to the customary water cushion that's used during drillstem testing to prevent collapse of the pipe.

Also, every precaution is taken to reduce the time the drill pipe is in contact with the sour gas.

Shell has had only one serious failure during drilling operations that could be definitely attributed to sulfide corrosion cracking.

In this case, which occurred before Shell started its corrosion-prevention campaign, five tool-joint failures occurred—two pins and three boxes.

The incident took place while the pipe was being jarred to free the packer after a drillstem test.

Hook load at the time of the failure was 50,000 lb. more than the weight of the string—well below the yield limit of the pipe.

The pipe had been exposed to the sour gas not less than ten hours.

**To protect the casing from sulfide corrosion, Shell uses highly alkaline mud plus an oil-soluble inhibitor.**

Well completions are made while the casing is filled with the mud.

After the final tubing trip, the annular fluid is displaced with oil containing 0.1% of organic corrosion-inhibitor.

In case the fluid level in the annulus should drop because of a tubing leak, Shell either refills it with inhibited oil, or injects a volatile aliphatic amine.

**The most important factor in preventing corrosion cracking of tubing is selection of the proper grade of tubing.**

Shell's report says J-55 tubing has a low susceptibility to sulfide-stress cracking, but that N-80 is more susceptible.

The sulfide-corrosion susceptibility of an N-80 tubing, however, can be lowered to that of J-55 by tempering the low-molybdenum N-80 at 1,000F for a half-hour.

**The company's current completion program for sour-gas wells calls for J-55 tubing, and for specially tempered N-80 at depths where N-80 is required.**

In wells where Shell had used J-55 tubing and untreated N-80 collars, stick inhibition was used with good results.

But no inhibition is necessary, says the Shell report, when J-55 or specially tempered N-80 is used.

When a well is shut in for an extended period, however, the tubing is plugged and then loaded with inhibited oil.

**To date, Shell has not found a way to reduce the sulfide corrosion susceptibility of P-105 or P-110 tubing.**

To bypass this condition, Shell uses heavy-wall J-55 and specially tempered N-80 at depths where P-105 material is usually required to maintain the desired safety factors.

**Standard Christmas tree alloys and special stainless steels are used to prevent sulfide corrosion of wellheads and valves.**

To reduce the failure of valve stems and springs, Shell now specifies K-monel. It used to use 400-series stainless steel. Standard Christmas tree alloys are used for all flanges, bowls, spools, etc. Flange 'O' rings are No. 316 stainless steel.

# Look for Arkansas Drilling Play

**Look for a new drilling play soon to stretch across the undeveloped northern halves of three counties in south Arkansas.**

The area in question runs from Camden, in Ouachita County, westward across Nevada County into Hempstead County, to a point about 20 mi. west of Hope.

There already is shallow production in the southern halves of Nevada and Ouachita Counties.

But most of the current attention seems to be focused on Hempstead County, where hundreds of dry holes have been drilled.

**One factor that points to more drilling is the recent heavy leasing activity in the three-county area.**

Carter Oil Co. triggered the play when it reportedly sent 30 agents into the area—mostly in Hempstead County—to sign up five- and ten-year leases at $1 per acre.

Carter has been conducting geophysical work in the area for the past two years. Most of its newly-leased land is in a straight line across the northern halves of Hempstead and Nevada Counties.

Within a week after the Carter leasing activity, other oil companies had joined the play, which spread eastward into Ouachita County.

Other active operators include Gulf Oil Corp., Murphy Corp., Ohio Oil Co., Placid Oil Co., Pure Oil Co., Sun Oil Co., and several independent companies.

Lease price in the Nevada County portion of the drive averages $1 per acre; in Ouachita County it averages $2.50 per acre.

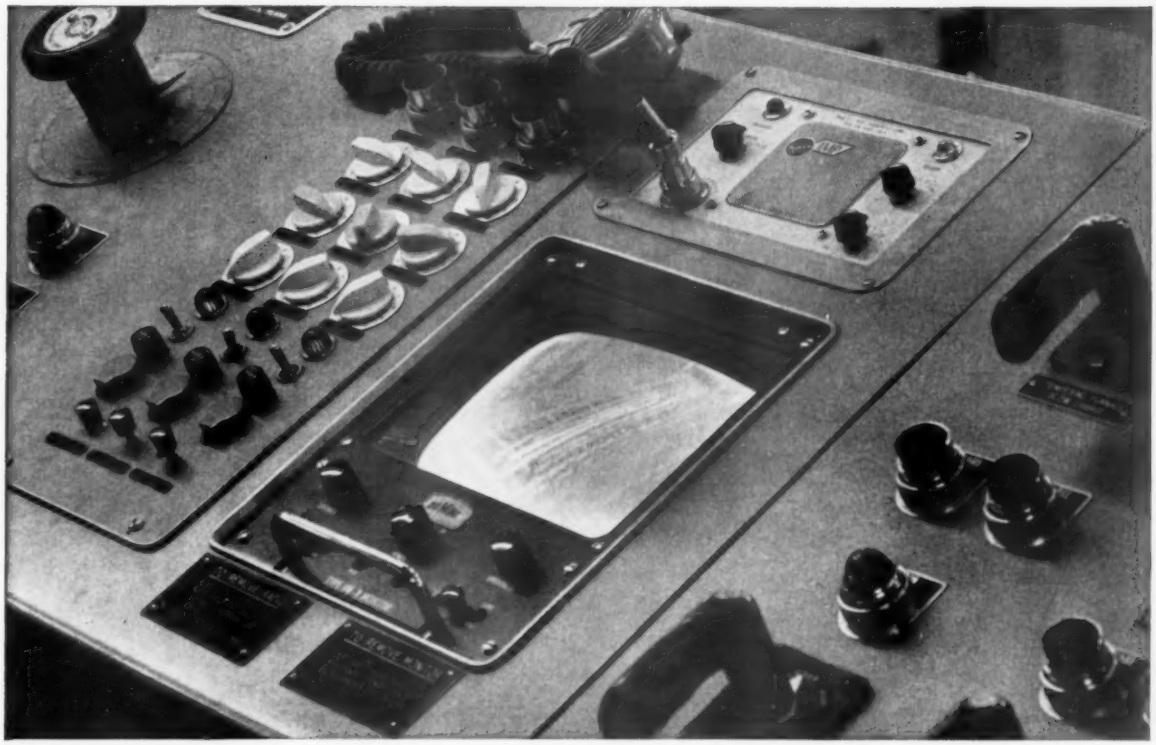
**Local sources believe the play is based on the expectation that deep production may underlie a rock shelf extending across the area.**

This belief seems to be supported by the direction and location of the Carter leases.

Virtually all tests made in Hempstead County have had oil shows, but not in commercial quantities.

Geologists believe the oil may have drained under the rock shelf. Because of this belief, observers anticipate deeper drilling than in the past (around 2,000 ft.) will be required to locate any production that may underlie the shelf.

And near Chidester, in Ouachita County, where good oil shows have been found in the past in shallow tests, deep tests are also expected.



# How Sheffield's "TV eye" speeds production of quality steel for your product

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Alloy and carbon steel billets, beams, plates and rods • Tankheads and hot-rolled merchant shapes • Bolts and wire products • Many other semi-finished and finished steel products.

The television screen you see above is on the control panel of Sheffield's new Houston heat-treating mill. It shows the progress of materials along the line. The operator can switch to various distant positions for an instant check. End result: on-time delivery of your steel.

The most advanced production and quality controls are very much a part of the picture in heat-treating, as in every other step of Sheffield steelmaking. These precision controls assure you'll get top-quality steel, exactly "tailored" to your specifications.

The oil industry, and manufacturers who serve the oil industry, have used Sheffield steel products for more than half a century. Sheffield is strategically located in the oil country. Freight advantages for you can be considerable. Time saved can be important. Sheffield has the know-how to help you determine the grade of steel and proper heat treatment to meet your product need at lowest cost. For the whole story, consult our technical staff.

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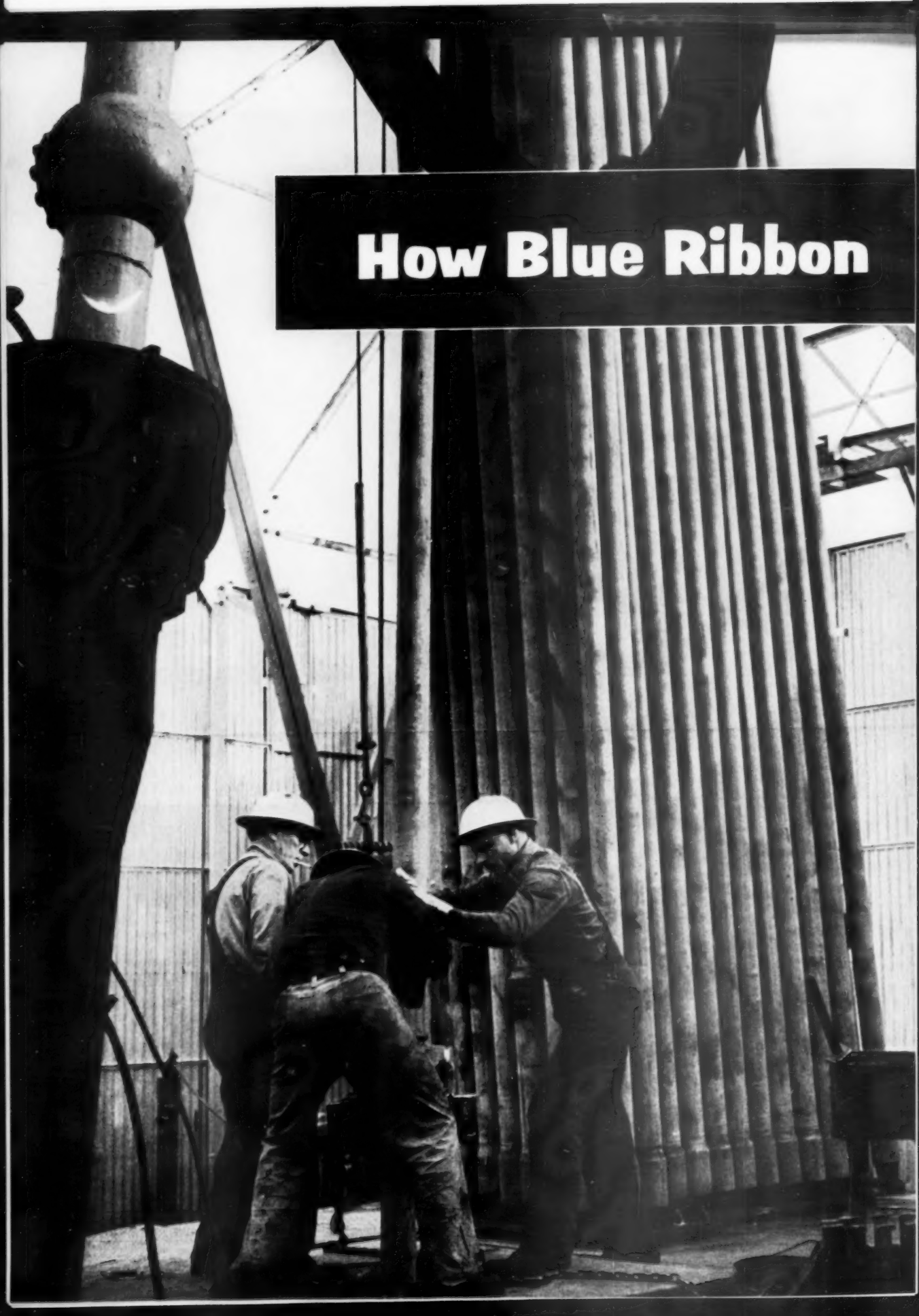
How Blue Ribbon

# Sets Drilling Records

When made of **Blue Ribbon** heat-treated alloy steel, or **Blue Ribbon Vanadium, J&L Drill Pipe** digs the world's deepest wells. Records for greater economy and over-all efficiency are established every day by **J&L Drill Pipe.**

There are built-in reasons — indestructible reasons — for the better performance of **Blue Ribbon.** These reasons begin at the iron ore mine and multiply through every guarded, tested step in mill and finishing processes. They are integral with the steel itself — and J&L is a great name in steel.

J&L Supply service, alert and capable, completes a drill pipe package contractors like. It assures improved performance from a major investment.

**J&L Drill Pipe** is made in sizes and grades to meet the requirements of careful management in planning wells to any depth. It is upset for grip type, counterbore weld and flashweld tool joints.

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**Jones & Laughlin**

**SUPPLY DIVISION** – Tulsa

If it's sold by J&L....
It's the best available

# What's New / IN EXPLORATION, DRILLING, PRODUCTION

## Oil Companies Lease Huge Arctic Tracts

**Oil companies are scrambling for exploration permits on Canadian Arctic lands.**

In the past month, ten companies have applied for oil and gas development permits on 50-million acres in the Arctic Archipelago, extending from Banks Island on the southwest to the northerly portion of Baffin Island. The figure is expected to keep climbing.

These recent applications are in addition to permits already issued by the Canadian government covering 76-million acres in the Northwest Territories and the Yukon.

The permits now being sought chiefly cover the Arctic islands and the continental shelf underlying the sea between the islands.

No permits in the current rush are being granted, pending completion of a revision of departmental regulations now in process. But the applications are being received and filed, for disposal on the basis of first-come, first-served.

## Properties Change Hands

**Evans Production Corp., Dallas, has bought a 40% working interest in six producers in the Delaware Basin region of West Texas.**

The wells are on two leases totaling 400 acres in Grice field, 16 mi. north of Mentone, Loving County.

The wells have a gross production of 540 b/d from the Delaware sand. Reserves assignable to Evans are estimated at 200,000 bbl.

**Heritage Petroleum Corp., Dallas, has increased its net oil reserves by approximately 1.8-million bbl. through its purchase of Frontier Drilling & Production Co., Midland, Tex.**

Frontier, which has been engaged primarily in lease development in Winkler County, Tex., has drilled 15 tests. Of these, 13 are producing, and 2 are being completed.

A waterflood system is being installed on the new Heritage properties.

**Landa Oil Co., Dallas, has acquired all assets of Souris Valley Oil Co., Winnipeg, Canada.**

William F. Lynch, Landa president, said the transaction involved approximately $1-million. He described the Souris Valley properties as including production in Saskatchewan, Manitoba, and Alberta, plus 30,000 net acres of nonproducing leases.

**Jade Oil Co., Los Angeles, has acquired a 25% interest in 9,600 acres of oil and gas leases in Terrell County, West Texas.**

The leases, which run from three to five years and carry a two-test drilling commitment, are located in the southeastern part of the county.

Jade presently has a crew in the area conducting a gravity meter survey.

**Texas American Oil Corp., Midland, has purchased a 180-acre lease in the Yates field, Pecos County, West Texas.**

A net of three producing wells is included in the transaction. Price was not disclosed.

The company plans to start drilling operations on several locations in the near future.

•

**Standard Oil Co. of California is giving back to the state 740 acres of its 960-acre offshore lease PRC 735.1 at Montalvo, Ventura County.** The company will retain the other 220 acres.

Since acquiring the lease in 1952, Standard has drilled 13 tests, two of which were dry holes. All tests were slant drilled from onshore locations.

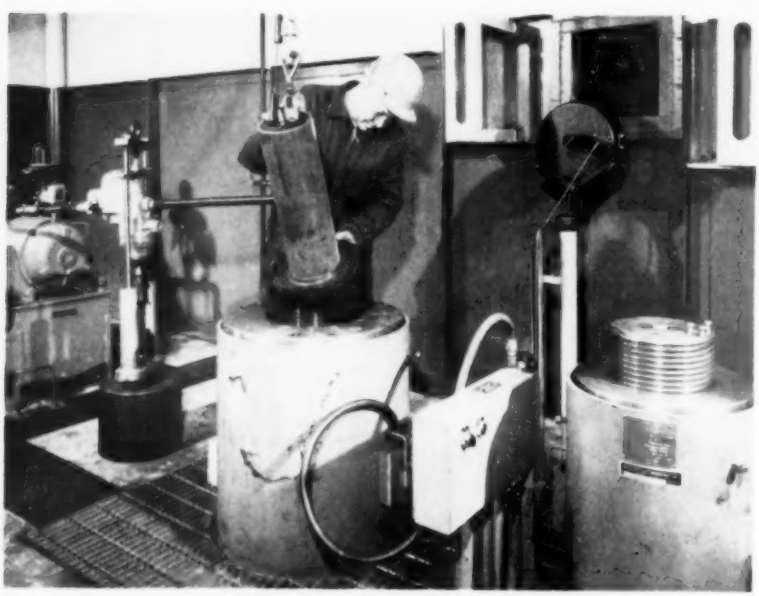
In filing the quitclaim, Standard said that, because of the slant drilling, the sliding-scale royalties, and the heavy viscous crude encountered, operating costs have been extremely high, and development has been carried to its economic limit.

•

**A bill aimed at releasing 1,280 acres of Alabama-Coushatta Indian lands for mineral leasing has been introduced into the Texas House of Representatives.**

The acreage is located in Polk County, East Texas. It was conveyed to the Indian tribes in 1954, but leasing for mineral exploration and production is restricted.

A board of Texas officials would supervise the leasing of the lands under the new bill. And all leases



## Casing Gets 25,000-lb. Pressure Test

**Straight from the production line, this sample of casing is lowered into one of the pressure vessels in Jones & Laughlin Steel Corp.'s new collapse-testing unit. Recently installed at J&L's Aliquippa (Pa.) works, the unit is capable of exerting 25,000 psi. pressure on casing ranging from 4½-in. OD to 10¾-in. OD.**

Link-Belt Chain is typical of the broad line of quality equipment stocked and distributed through National's 124 stores.

## This is the National Supply Store, too!

THE NATIONAL SUPPLY COMPANY
NSCO

The next time you stop in a National Supply Store, remember to shop *behind* the counter, too. You'll see quality equipment like this Link-Belt Chain, Ajax Engines, Oilmaster Pumps, Tube-Turn fittings, Rockwell-Nordstrom Valves and many more. In the warehouse, and other parts of the store you may not often see, is the secret of National's — and your — success.

***On the next pages: Three National products for new drilling efficiency!***

# THESE NATIONAL COMPONENTS CAN LOWER

## New NATIONAL Micromatic Drilling Control

Usable on almost every drawworks, new or used, National's new Model #6 Drilling Control is more compact, lighter and less expensive than the familiar Model #4. Essentially, it's an automatic driller, because it operates the drawworks brake just as the most experienced driller does—and insures the exact penetration rate desired.

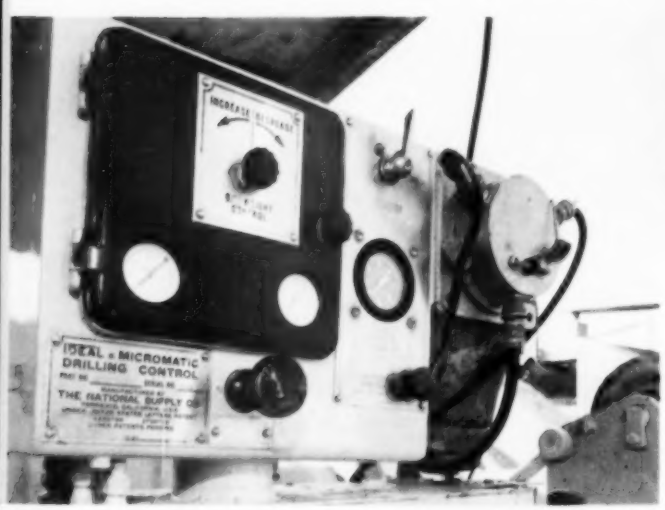
The driller first obtains the desired amount of weight on the bit; snaps and locks the control connecting rod to the brake lever and then opens two air valves in the control cabinet. The Micromatic Drilling Control then takes over the drilling operation and maintains the desired weight on the bit.

Feeding is smooth and continuous, the drilling string is under complete control at all times, weight on the bit can be increased or decreased at will and the control can be engaged or disengaged in a matter of moments! All controls, of course, are within easy reach of the driller.

You get many advantages with NATIONAL Micromatic Drilling Control. First, it's like doubling the drilling team without doubling the payroll. The result is reduced drilling time, whether through uniform or changing strata.

Micromatic Control is safe. Inoperation of any part results in nothing more serious than automatic restraint of feed off. All parts are rugged and conservatively rated. Naturally, this dependable control is thoroughly field-tested, in both straight and directional drilling. Remember, it's adaptable to any rig. Installation time is about six hours and can be done on location. Ask a National Supply representative to show and tell you more about it.

Micromatic Drilling Control automatically and constantly maintains a predetermined weight on the bit. ▶



◀ Micromatic Drilling Controls are within easy reach of the driller, and controls can be engaged or disengaged in a matter of moments.

# YOUR DRILLING COSTS IMMEDIATELY!

NATIONAL Auxiliary Drawworks Drive consists of a small fluid coupling, scoop controlled, mounted on a countershaft on the front engine frame. Power is transmitted to this by a chain drive from the front drive group shaft.

## New NATIONAL Auxiliary Drawworks Drive

Here is a new field-tested drive system that can lengthen the service life of your drilling engines, and help you perform many drilling jobs more efficiently! Named the NATIONAL Auxiliary Drawworks Drive or "Run-Around Drive," it permits all engines in a drive group *to operate as a single power unit while drilling*. But, at the same time, rotary speeds can be varied to meet all drilling needs.

To accomplish this, the NATIONAL Auxiliary Drawworks Drive simply diverts power (a maximum of 300 horsepower) from the combined power of all engines. This diverted power is used to operate the rotary via the drawworks under the very accurate control of a fluid coupling. Meanwhile, all the engines continue to run at a speed which adequately supplies the more extensive mud pump power needs. Of course, in a hoisting cycle when pumps are not in use, all power can be diverted.

As you can see, there are many benefits to this system. No single engine is lightly loaded or severely overloaded—a condition which frequently occurs without this drive. A number of rotary speeds can be selected accurately and quickly for various drilling conditions. And, this "cushion" drive for the drawworks and rotary permits fine control on delicate fishing jobs, core reel operations, tonging, wire line moving or renewal.

Get more information now on this outstanding NATIONAL Auxiliary Drawworks Drive! It can be tailor-made to fit your rig. Ask the National Supply representative in your area for complete details.

***More on the next page . . .***

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## May 14-23

**The biggest, most colorful show in petroleum industry history!**

NATIONAL COMPONENTS FOR LOWER DRILLING COSTS (Continued)

# New NATIONAL Pulsation Dampener

The NATIONAL Pulsation Dampener contains no rubber diaphragms, bags or sleeves. It operates on, but does not deplete, rig air supply.

The NATIONAL Pulsation Dampener is a pressurized air chamber device designed especially for use with large slush pumps. Based on a new principle, it completely eliminates rubber diaphragms, bags and sleeves. By effectively cushioning surges due to the pump's reciprocating action, this new dampener protects rotary hose, fittings and high pressure mud lines. It also safeguards the pump itself against premature leakage due to vibration. By reducing the wear and tear on fluid end and other parts, NATIONAL Pulsation Dampeners minimize the maintenance required on the entire mud system—and they do it with little care or maintenance themselves. Check the design features listed here; then contact the National representative in your area for all details.

## DESIGN FEATURES

1. Completely eliminates troublesome rubber diaphragms, bags and sleeves. Only rubber element is a simple disc valve, which can be replaced easily and inexpensively.
2. Available as original equipment, or for replacement, on all large pumps.
3. Operates on rig air; no supply of high pressure air or nitrogen needed for precharging.
4. 5,000 psi working pressure, 8,000 psi test.

**THE NATIONAL SUPPLY COMPANY**

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would have to be ratified by the tribal councils of the two Indian tribes.

•

**Pan American Petroleum Corp. is operator of the newly approved Irish Creek unit in southern Wyoming and northern Colorado.**

The unit, which includes 20,305 acres in Sweetwater County, Wyo., and Moffat County, Colo., is in 98w and 99w, 11n and 12n, east and southeast of production at Hiawatha Dome.

Working interests are held by Hancock Oil Co., Champlin Oil & Refining Co., Republic Natural Gas Co., Ohio Oil Co., Kewanee Oil Co., and Mountain Fuel Supply Co.

•

## Engineering

**A new all-purpose dispersant for drilling muds has been developed by Magnet Cove Barium Corp.**

The company says laboratory tests show that the new thinner, called "Spersene," performs well in all muds. Its compatibility, says Magcobar, eliminates the necessity of using selected dispersants for particular mud conditions.

The company says that less of the thinner is needed for viscosity control, and that it therefore offers "substantial savings." Other cost reductions, says Magcobar, are expected through elimination of "hot shot" loads of special chemicals; smaller and simpler space requirements for chemical additives; and less rig time and fewer manhours for mud conditioning.

•

**Schlumberger Well Surveying Corp. is speeding evaluation of logs run in the Denver-Julesburg Basin by using a facsimile transmission system.**

This is said to be the first time a facsimile transmission system has been used for this purpose.

Logs run on wells in the basin are immediately transmitted to Denver from stations at Kimball, Neb., and Ft. Morgan, Colo.

The full log heading with quantitative analysis, plus curves on potential pay sections, is transmitted on 8½ x 11-in. sheets.

According to Schlumberger, the system allows technical decisions as to running pipe, etc., to be made by top management, without incurring unusual delay and standby expense.

In addition, the process permits an interest-holder to examine the logs before final decision is made by the principal operator.

## Drilling Highlights

**West Texas**—Fred Turner, Jr., No. 3-BB Shannon, tract 22, league 4, Archer County school land survey, Crockett County, which blew out of control for 24 hours and flowed at an estimated rate of 75,000 b/d to 100,000 b/d (PW—Feb.13'59,p28), was completed at the rate of 2,152 b/d of 31.5-gravity oil, based on 4-hour flow through 1¾-in. tubing from open hole at 1,825-51 ft. The well is producing from a sand stringer above the 1,923-44-ft. pay found in the Southeast Noelke Queen sand pool discovery one location south.

**California**—Reserve Oil & Gas Co. No. 311-19 W-T, section 19-11n-19w, Kern County, proved up a new zone—the Z6 in the Vedder sand—in North Tejon field, being dually completed for 321 b/d of 30.7-gravity oil from the Z6 at 11,384-715 ft., and for 752 b/d of 35.7-gravity oil, plus 685,000 cf/d of gas, from the Z1R and Z1 zones in the over-all interval from 9,378-790 ft.

**Oklahoma**—Cooperative Refinery Assn. No. 1-A Michener, section 31-7n-3w, McClain County, flowed 11.6 bbl. of oil per hour through ¾-in. choke and perforations at 10,870-71 ft. in the Second Bromide (Ordovician). The venture is only the third operation in the long-dormant Iron Chapel pool, opened in January, 1946.

In Custer County, Magnolia Petroleum Co. No. 1 Miller, section 22-15n-16w, 8 mi. southeast of a lone gas producer and 46 mi. due south of a similar Devonian producer, flowed 5.1-million cf/d of gas through 13/16-in. choke and perforations at 14,808-18 ft. in the Hunton.

**West Central Texas**—Leo Vesenmeir, Jr., No. 1-5 Ross Sloan, John M. Peveler survey No. 1, Shackleford County, was completed as a Mississippian discovery for 179 b/d of 42.5-gravity oil through 10/64-in. choke and perforations at 4,341-46 ft.

**British Columbia**—Gulf States Oil Co. of Canada No. 2 Clarke Lake, 10 mi. east of Ft. Nelson on British Columbia Petroleum & Natural Gas Permit No. 195, flowed 22.5-million cf/d of gas from a dolomite in the middle Devonian.

**Wyoming**—Brinkerhoff Drilling Co. No. 1 Govt.-Miracle, section 35-29n-112w, Sublette County wildcat 4½ mi. east of Big Piney field, flowed gas at the rate of 2,336,000 cf/d on drillstem test of a formation believed to be in the Mesaverde transition zone.

*Here's how you can*

**CUT YOUR VALVE BILL HALF-IN-TWO**

When you specify UNIBOLT Wing Valves you skimp on just one thing . . . cost. Where else can you get so much valve at so little cost? For instance, a 3000 w.p. UNIBOLT Wing Valve with threaded inlet and outlet costs little more than *half as much* as a comparable gate or plug valve.

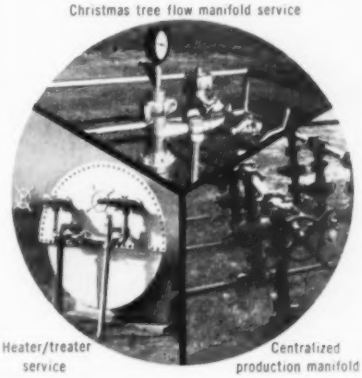
**Additional and continuing savings result from:**

(1) Ease of repair in the field—no special tools or skill required.
(2) Repair parts, such as stems and seats, are inexpensive.
(3) Non-lubricated—no expense for greases and no labor for lubrication maintenance.
(4) A standard UNIBOLT Coupling on the outlet of the Wing Valve saves the price of a flowline union.

Furthermore: The UNIBOLT Wing Valve is also recommended for services where throttling is necessary; the 1-inch seat will pass 7 million cu. ft. of gas per day with only a 200-lb. pressure drop, 10,000 bbls. of fluid per day with a 100-lb. pressure drop; may be trimmed in hard chrome to resist abrasion, 11-13% chrome to resist corrosion; and may be readily converted to a positive type choke for production service.

If specifying or buying valves is your job, let us give you the complete story on UNIBOLT Wing Valves.

Christmas tree flow manifold service

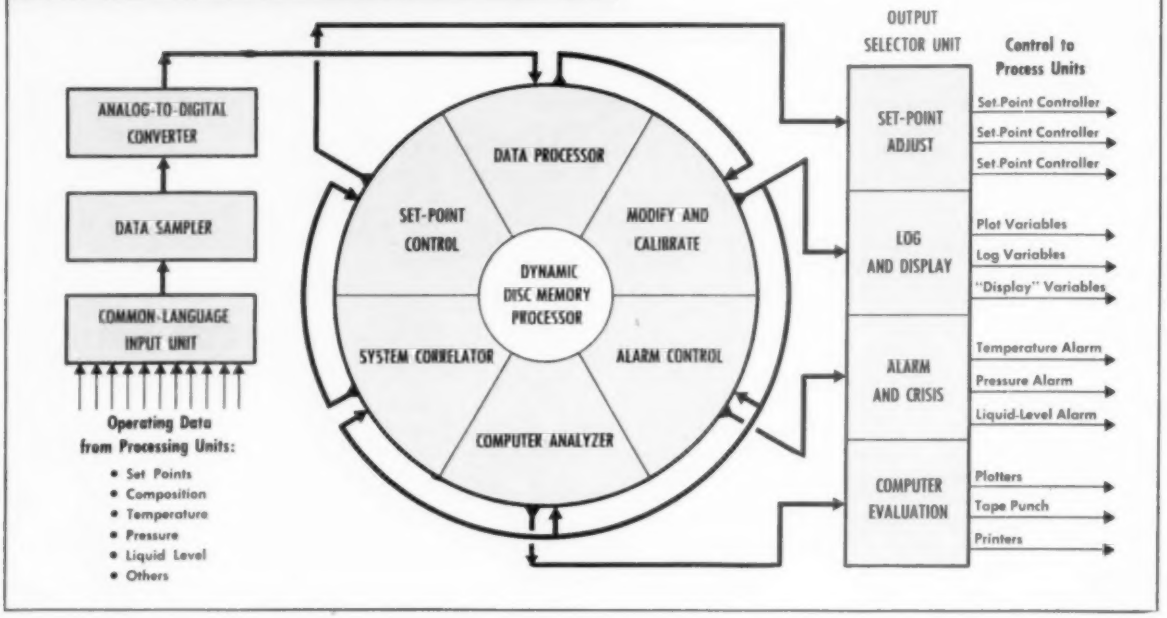


Heater/treater service

Centralized production manifold

**THORNHILL CRAVER CO.**
P. O. BOX 1184 HOUSTON, TEXAS

**How the Genesys Computer Controls Processes**




# Sun-Genesys Team Tackles Automation

**Sun Oil Co. is staking its claim in computerized process control by teaming up with Genesys Corp., West Coast computer maker, to find a "new automation system free from preconceptions."**

The system to be developed is for Sun's modernly instrumented No. 12 plant at its Marcus Hook (Pa.) refinery. Sun's part of the joint developmental program will be headed by Paul D. Barton, director of advanced management and methods.

For Genesys Corp., Los Angeles subsidiary of Chance Vought Aircraft, Inc., of Dallas, Geoffrey Post, vice-president, systems engineering, will work with Sun.

**The Genesys "Dynamic Memory Processor," a computer specifically designed for process-control work, will be the heart of the Sun-Genesys program.**

For best results, a computer must be designed primarily as a process control computer, according to John F. Davis, vice president for Genesys. He feels that it should not be a modification of another type of computer, originally designed for entirely different purposes.

A process-control computer must have extended on-stream reliability, whereas a military computer may require only a few hundred hours (or even minutes) of operation between shutdowns. On the other hand, however, a process-control computer will be used in the relatively decent atmosphere of a control room—free from shock, vibration, temperature extremes, and salt spray.

**Genesys disagrees strongly with many industry spokesmen who say process dynamics must be known mathematically before satisfactory computer-control is possible.**

Precise process control is possible, Davis says, with only a gross, or overall, knowledge of the system's behavior, by using strong feedback methods, to ensure stability, and a correlative computer.

Such a computer, he says, can be programmed with the same empirical charts and rules-of-thumb used to guide manual operation of a process.

In fact, he says, there is no complex system in any field whose dynamics can be expressed precisely in mathematical terms.

The Genesys computer package, as described by Davis, can simulate the dynamics of a refining process without needing to know its mathematics. This is possible, he says, because of the "learning machine" aspect of the computer, which programs small changes, and, through a correlative technique, finds the relative effects of the different process variables on the process output.

**Unique, process-oriented features are claimed for the Genesys computer.**

The computer "time-shares" its basic components by using sequential rather than parallel operation. This is possible because the relatively slow nature of refining processes allows a single computer component to accomplish several computational steps, one after the other. This, in turn, reduces the number of parts needed in the computer and increases its operational reliability, according to Davis.

The computer itself is a hybrid machine, which uses both incremental and arithmetic computer techniques. The incremental aspect applies especially when controlling a process variable that varies through only a relatively small range above and below the desired value. This too, Davis says, simplifies the computer.

In fact, Genesys estimates that the reliable on-stream operation period for the computer is at least 4,000 hours (or constant 24-hour day operation for six months) without shutdown for maintenance.

Simplicity of operation and mainte-

nance are further process-oriented factors claimed for the Genesys computer. Davis says that the computer is easily run by refinery operators, and can be repaired quickly with plug-in replacement components.

**A typical Genesys computer system contains input units, a storage-computation-correlation computer, and output units** (diagram, page 28).

The input part of the system is composed of an input signal receiver, a data sampler, and an analog-to-digital signal converter.

The computer portion of the system performs six jobs:

- Data-processor channels store all process variables for a half-hour.
- Modification and calibration channels store analytical and empirical calibration data for use elsewhere in the system.
- Alarm control channels store quasipermanent (can be reprogrammed) operating limits for process variables.
- Computer-analyzer channels simulate the process dynamics and analyze the process to allow optimization of operating conditions.
- System correlator channels determine the relative importance of the process variables as they affect the system behavior, using analytical, empirical, operator-experience, or rule-of-thumb data.
- Set-point-control channels monitor and store all relevant set points, and send signals to reset them when needed, as computed by the correlator unit.

Output equipment includes the usual array of signal transmitters for controllers, alarms, plotters, tape punches, printers, display, and so forth.

**Genesys suggests a two-step program for refiners wishing to investigate computer-control of processes.**

It will build a small, analytical, prototype computer on the basis of a process scheme and data furnished by the processor. This unit, complete with memory, input, and output equipment, can be bought at a figure under $100,000. According to Davis, this prototype computer is a flexible unit which will determine optimum operating conditions for the process, and will serve to demonstrate whether computer-control is feasible.

The processor can continue to use the prototype computer to control the process, or he can order a less expensive (but relatively inflexible) process-control computer designed on the basis of information acquired by the prototype unit. If the latter alternative is taken, the prototype unit can be reprogrammed and used to study some other process in the refinery.

*New petrochemical affiliate formed as . . .*

# Sohio and Atlas Join Hands

**Sohio Chemical Co.'s new acrylonitrile plant and other petrochemical facilities at Lima, Ohio, will be transferred to Solar Nitrogen Chemicals, Inc., a new company set up jointly by Standard Oil Co. (Ohio) and Atlas Powder Co.**

Solar Nitrogen is to take over all of Sohio's ammonia and petrochemical facilities in Lima, and will "engage in the manufacture and sale of its agricultural chemicals."

Sohio Chemical will continue to operate the plant and act as sales agent for the new company. The Sohio Chemical product line, service policies, and sales territories will remain the same.

The purpose of the move is apparently to get some new capital for Sohio's petrochemical business. For Sohio, it ties up a good customer: Atlas uses ammonia in its explosive and other chemical business. And for Atlas, it ties up a good source.

**Acrylonitrile production plans are unaffected by the formation of Solar Nitrogen, and will continue as previously reported** (PW—Feb.13'59, p34).

The multimillion-dollar plant will be located adjacent to Sohio Chemical's present petrochemical operations at Lima. Construction is to start this spring, with completion scheduled for early next year.

**The Sohio-developed acrylonitrile process will give the company a unique position in the market.**

It will be the only commercial producer of acrylonitrile using refinery propylene and ammonia as raw materials. Also, it will be the only petroleum-company affiliate in this field—and the only producer that does not already have a substantial captive market for its acrylonitrile. However, Sohio feels that the market will grow enough so that this will present no problem.

**The process to be used requires only propylene, ammonia, and air as raw materials, and is said to have important economic advantages.**

Sohio describes the process as a catalytic, vapor-phase reaction. The company considers it a major technical breakthrough for their scientists.

Normal refinery propane-propylene mixtures can be used in the process, as it is selective for propylene. Sohio will use most of the propylene output of its Lima refinery for acrylonitrile production.

The company says that acrylonitrile produced by this process is fiber grade, and contains none of the impurities or "ghost" contaminants that present problems in the conventional acetylene or ethylene-plus-HCN (hydrocyanic acid) routes to acrylonitrile.

**No noncommercial byproducts are made by the process, according to Sohio.**

The company expects to recover commercial quantities of acetonitrile as a byproduct. Though present markets for this material are restricted, Sohio hopes to develop new markets for it "at prices lower than the present rate of 45¢ a lb."

**Currently, there are four commercial makers of acrylonitrile. They produce about 300-million lb. of it a year.**

Producers of acrylonitrile are: Monsanto Chemical Co., at Texas City, Tex.; Union Carbide Corp., at Institute, W. Va.; American Cyanamid Co., at Avondale, La.; and Goodrich-Gulf Chemicals, Inc., at Calvert City, Ky.

Major markets for acrylonitrile are: as a principal raw material for "miracle" fibers such as Orlon and Acrilan; as a component in plastics such as Tyril and Marbon; as a component in the chemical- and oil-resistant nitrile rubbers; and as a raw material in other chemicals.

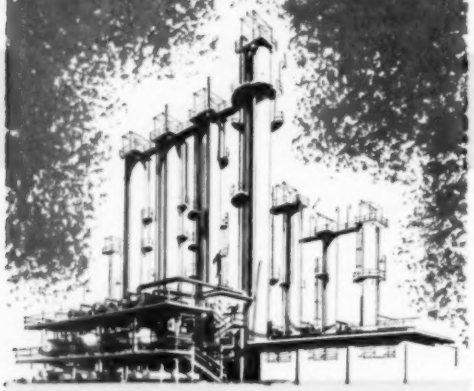
Sohio estimates that 75% of the market for acrylonitrile is for fibers.

**Sohio has applied for patent protection of its process, which, it says, may result in new ways to produce other petrochemicals.**

Patents have been applied for in all major countries. Although Sohio says it has no immediate intention of licensing the process to other companies, it points out that, since propylene is almost universally available, "the process may well prove useful in countries where both ethylene and acetylene are in limited supply, or where the cost of these materials is significantly higher than that of propylene."

Other dividends, in the form of new routes to other petrochemicals, seem possible from the basic acrylonitrile process. According to Charles E. Spahr, Sohio's president, the company's research team has discovered other new processes in the same general field that will probably be translated into petrochemical plants within the next few years.

# Now any refiner can process any crude he wants...



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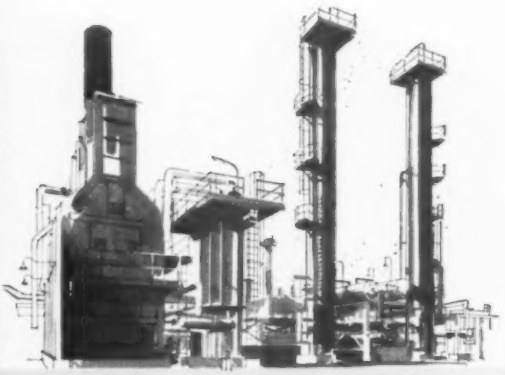

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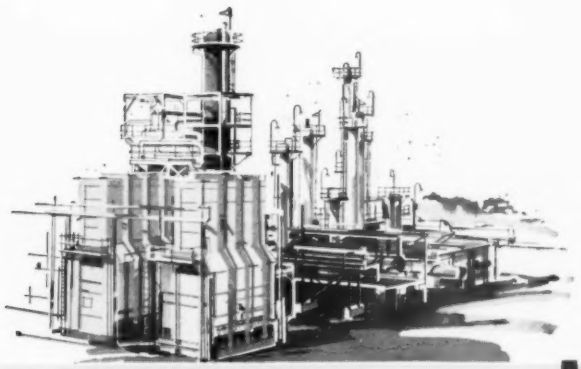
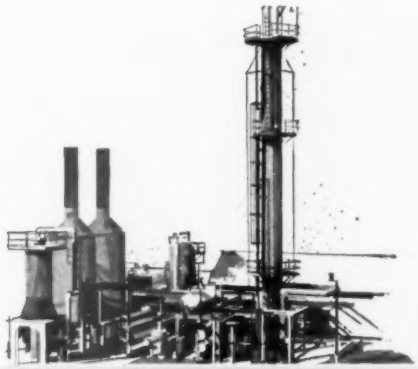
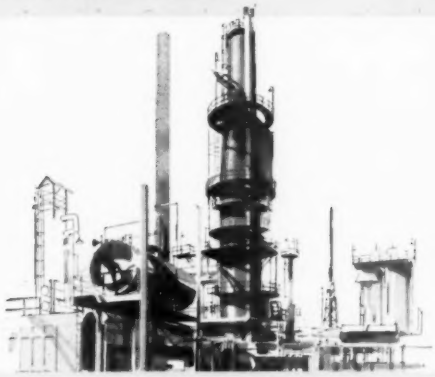


**BUTAMER*** a new and practical process for producing isobutane



**UNIFINING*** a modern process that completely purifies petroleum distillates



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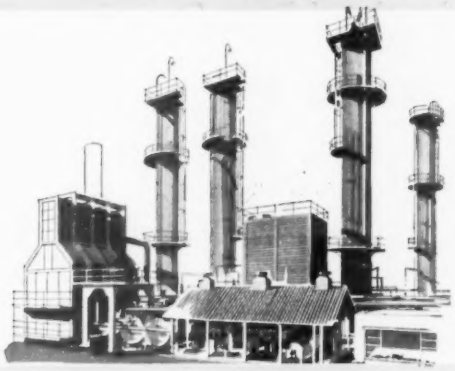

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# What's New / IN PROCESSING AND PETROCHEMICALS

**Sun Oil Co. and American Viscose Corp. have formed a jointly owned affiliate, AviSun Corp., to exploit Sun's new polypropylene process.**

AviSun will combine the new polypropylene process developed by Sun scientists with new methods for the manufacture of polypropylene film and fibers developed by American Viscose.

Commercial quantities are expected by midsummer from leased facilities of the Port Reading (N.J.) linear polyethylene plant of Koppers Co. Koppers will operate the process under technical direction of AviSun. Capacity of the converted plant is estimated to be 20-million lb. a year.

•

**A new high-temperature synthetic lube oil for jet engines, developed by Celanese Corp. of America, has been accepted by the military.**

The new lube, said to withstand temperatures up to 400F for sustained periods, is an ester-type base fluid containing selected additives. Celanese developed the base fluid, and the Materials Laboratory at the Air Research & Development Command's Wright Air Development Center developed a silicon-containing additive for the lube.

•

**Commercial Solvents Corp. has purchased the assets of Louisiana Gas Production Co.**

Louisiana Gas is a small producer in the Monroe (La.) gas fields. Its assets consist mostly of wells and pipelines.

CSC will use the new gas supply to help feed its two petrochemical plants at nearby Sterlington.

•

**A group headed by Arkansas Fuel Oil Corp. will build a gas processing plant 15 mi. southeast of Kingsville, Tex., adjoining AFO's May field separation unit.**

The plant will cost $1¼-million, and will process 34-million cf/d of gas. It will be designed to yield 29,000 gal. of natural gas liquids a day. It is slated to go on stream in October.

AFO will own 80% of the facility. Other owners will be Heep Oil Corp., Sun Oil Co., J. Ray McDermott & Co., Mokeen Oil Co., Renwar Oil Corp., and Champlin Oil & Refining Co.

•

**Standard Oil Co. of Texas is operating a 45-million cf/d "packaged" gas processing plant at its Padre Island field off Corpus Christi, Tex.**

The unit, furnished by Parkersburg Rig & Reel Co., operates on a combination refrigeration-gas absorption cycle. It will operate unattended. Gas enters the plant at about 1,000 psi. and 60F. Initial tests indicate liquids recovery of about 5,000 gal. a day.

•

**Tidewater Oil Co. has acquired 550 acres adjacent to its Avon (Calif.) refinery.**

The company says it has no immediate plans for the property, but regards it as "insurance for future expansion."

The new land cost $2,000 an acre.

•

**A petroleum-coke calcining plant will be built near Purvis, Miss., by Kaiser Aluminum & Chemical Corp.**

Kaiser has acquired a 20-acre site adjacent to the Purvis refinery of Pontiac Eastern Corp., which will supply the coke. The unit will calcine about 70,000 tons of coke a year to make carbon anodes for electrolytic cells in Kaiser aluminum plants.

Plant investment will be about $500,000. Construction will start soon, with completion scheduled in about six months.

•

**Ohio River Chemical Co., the joint venture of Spencer Chemical Co. and Industrial Rayon Corp. that was announced July, 1958, has canceled plans for a caprolactam plant south of Ashland, Ky.**

Caprolactam is a basic raw material used in the manufacture of nylon. The cost of the plant was to have been $10-million.

## New Plant to Study Catalyst Life

**This many-bottled operation is an important part of the new "catalyst-aging" pilot plant at Esso Standard Oil Co.'s Baton Rouge (La.) refinery. Esso is using the new equipment to learn the life expectancy of the many catalysts used and proposed for use in the refinery's processing units. Esso researchers at the new pilot plant are also studying addition of various chemicals to prolong catalyst life.**

## No other flow meter gives you the accuracy, convenience and economy of the new Honeywell Bellows Flow Meter

- **Calibrated accuracy ± 0.5% of full scale**
- **Leakproof between liquid fill and process fluid**
- **No mercury to contaminate process fluid**
- **No zero shift between —40 and +250°F**
- **Fast range changing in field; choice of fifteen ranges**
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Here's the most advanced meter body available today for flow and liquid level metering. You can use it with virtually any process fluid, with combustible fluids, and in hazardous atmospheres. Meter body has connections for either vertical or horizontal piping. Remove it from the system for servicing without disturbing the piping.

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# Honeywell

First in Controls

# How Near Is the 42-in. Gas Pipeline?

**Pipeliners are reaching out for still another milestone—use of 42-in.-diameter pipe in gas transmission systems.**

Just a few years back, most gas pipeliners had their doubts as to the economics of using 36-in. pipe, the largest-diameter pipe in natural gas transmission today. But forced by the need for higher-capacity lines, several companies tried the big big-inch line, and proved it to be practical.

Now the same upward surge in gas demand is forcing gas carriers to consider using still larger pipe—42 in. in diameter.

**Several gas transmission companies are considering using 42-in. pipe in some of their 1959 projects.**

Their feeling is that if you are going to lay new line, it might be better to put down line that will serve your long-range needs—unless it's too expensive.

That's where the indecision enters the picture: None of these companies are dead sure as yet that tomorrow's gas markets—encouraging as they are—justify the added cost of the 42-in. line at this point.

**The main point in such considerations: Can the additional throughput offset construction costs which would probably be considerably higher than those for laying 36-in. pipe?**

Pipeline contractors' estimates on laying 42-in. pipe vary all over the place. The reason is that the contractors have little concrete information and no experience on which to base such estimates.

Even the lowest estimates are that 42-in. pipe would cost 25% more to lay than 36-in. pipe.

One big reason for expecting such a large increase: Despite the fact that manufacturers of pipe-laying equipment have largely kept up with the current trend toward larger and larger pipe, it's quite likely that a good deal of new spread equipment would be necessary to handle the 42-in. pipe.

Some gas pipeline companies say that if contractors can actually lay the larger pipe at not more than 25% over the 36-in. cost, 42-in. pipe would have economic payout.

The 42-in. lines laid this year will be experimental, put down in short stretches—say 10 mi. or so—to determine just how expensive such construction really would be.

**When and if 42-in. pipe is used in long-distance-natural gas transmission, it will have to be used to connect areas of exceptionally large production and consumption.**

No company is going to build a 42-in. line without assurance that the line will be operating at or near capacity as much as possible.

So the 42-in. line will have to serve a high-demand market—for instance a city such as Chicago, which is now crying for gas—and will also have to have commitments for large gas reserves.

**Furthermore, some pipeline observers contend that the most economical use of 42-in. pipe would be in looping projects, rather than in new main lines.**

The reasoning here is that an entire long-distance main line of 42-in. line would be quite expensive. In a looping project, however, the higher-capacity advantage of the outsized pipe could be realized with a minimum of equipment and construction expense.

One company's new study on the comparative capacities of big-inch gas transmission pipe (all other things being equal) came up with these figures:

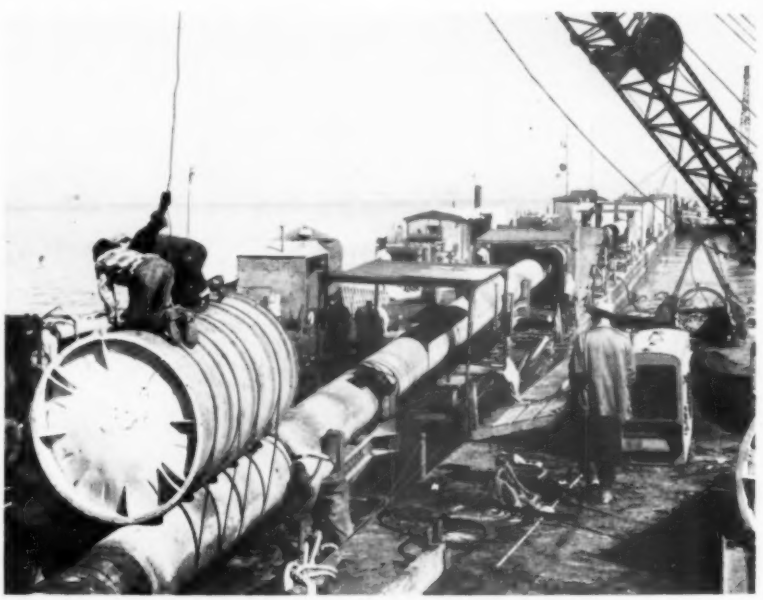
For 30-in. pipe, 550-million cu. ft. of gas daily; for 36-in. pipe, 910-million cf/d; and for 42-in. pipe, 1.4-billion cf/d.

**Pipe manufacturers seem to have licked the technical problems of supplying 42-in. pipe equal to the needs of gas transmission.** The main problem is maintaining sufficient rigidity in the pipe wall.

Bethlehem Steel Co. has just announced that it is ready to make 42-in. pipe suitable for gas transmission. Bethlehem says its 42-in. size is available in wall thicknesses from ¼ to ¾ in., with yield strength meeting API specifications through X56.

Kaiser Steel Corp. also is ready to make such 42-in. pipe.

And one other major pipe maker told PETROLEUM WEEK last week that it was "investigating entry into the manufacture of 42-in. steel pipe very extensively."

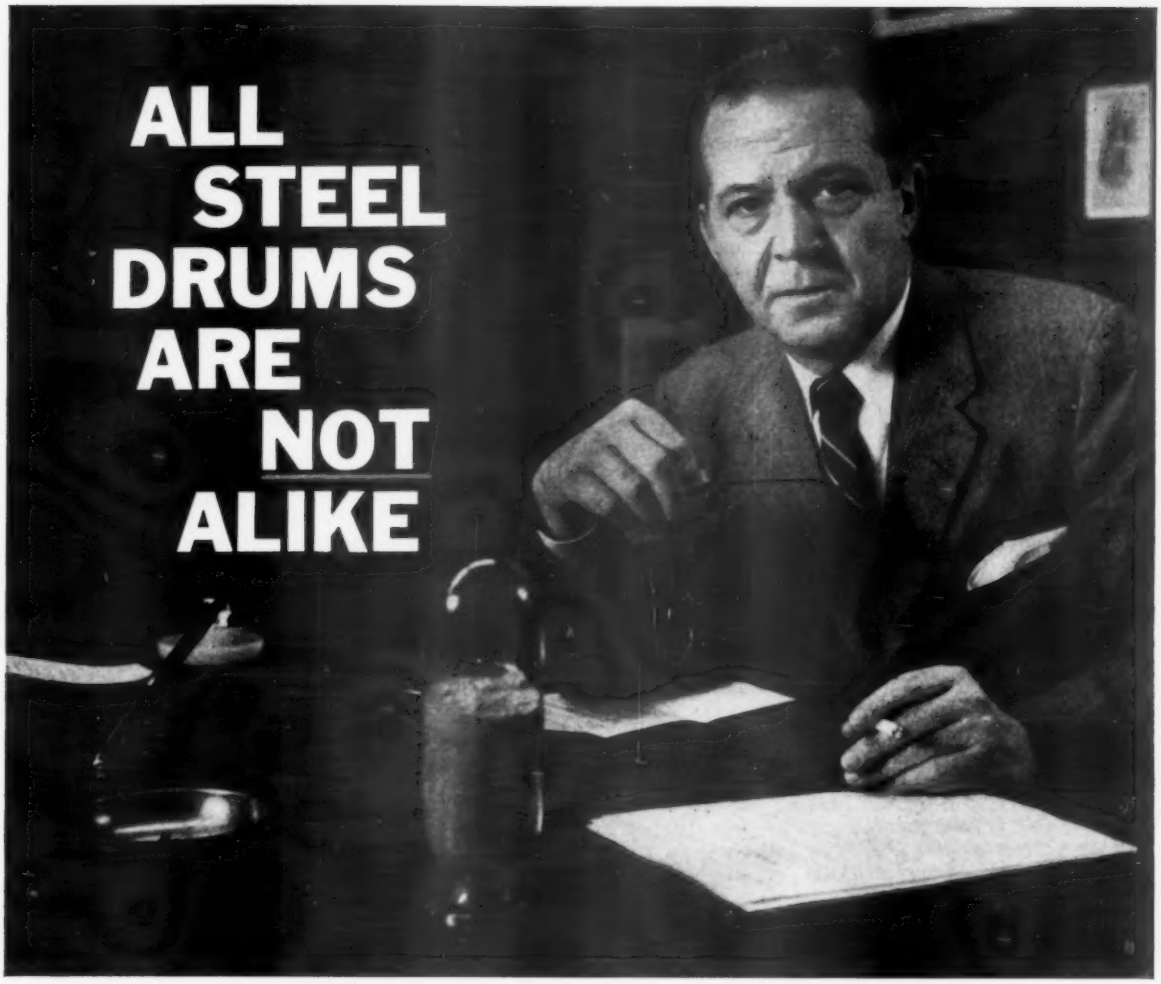


## Texas-Florida Line Crosses Galveston Bar

**Here's a supervisor's view of recent activity on the spread laying 24-in. pipe across Galveston Bay for Coastal Transmission Corp.**

**The Galveston Bay line will be part of Coastal Transmission's 574-mi. gas transmission mainline from McAllen, Tex., to Baton Rouge, La. At Baton Rouge, the line will be linked with Houston Texas Gas & Oil Corp.'s line to southern Florida. The entire system is expected to be in operation by late spring.**

**Brown & Root, Inc., is handling the Galveston Bay section for Coastal.**

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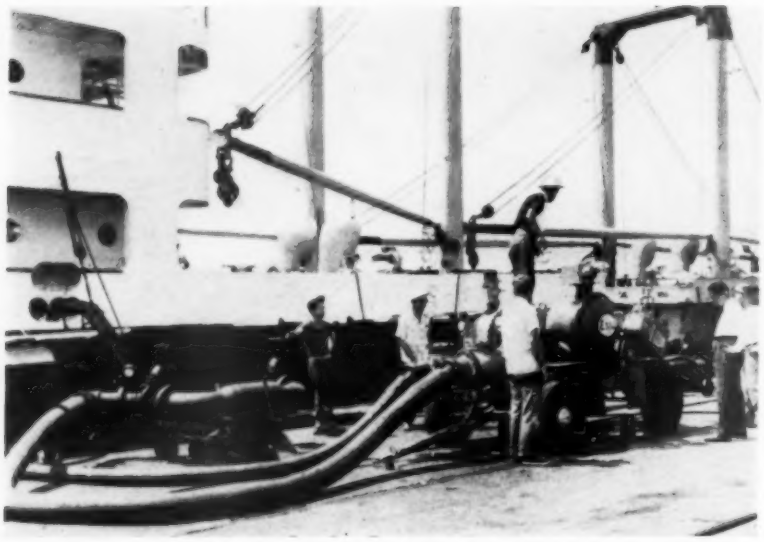

# Bunkering Is Speeding Up, Too

**Tanker fueling is a quick and relatively simple operation at the growing number of bunkering stations now using the mobile bunkering blender** (picture).

The mobile blender is a portable or skid-mounted unit for continuous and automatic blending of residual and distillate fuels at dockside. It can blend to a wide range of viscosities—thereby satisfying the demands of even the most precise fuel engineer.

The blend range is from 90% resid-10% distillate to 50% of each.

The blender is now in use at several bunkering stations in the Caribbean and on the African West Coast.

**The blender eliminates the need for a good deal of bunker station tankage and pumping equipment.**

Because of the blender's wide range, bunker stations using it need not store a great inventory of tanker fuels—sometimes hundreds of finished blends—in many storage tanks. And the blender makes unnecessary the special blending tanks so long a part of bunkering.

The blender contains two positive displacement meters, one for each stream. The meters are linked through an adjustable variator and mechanical differential, which operates the blender and stops all pumping should either line stop.

The pressure differential between the resid and distillate stream flow provides the power for the unit. No outside power supply is needed.

The blender's standard loading rate is 2,100 gal. per minute, although higher capacities can be built into the unit.

B-I-F Industries, Inc., of Providence, R. I., makes the mobile blender.

# U.S. Atom Tanker Delayed

**Construction of the first U.S. atomic tanker has been delayed indefinitely because of "budget considerations."**

Until last week, it was felt that this country, although it would probably not be the first to build a nuclear-powered tanker, would have such a vessel in operation by the early 1960s (PW—Aug.29'58,p13).

The Maritime Administration, along with the Atomic Energy Commission, has long favored the idea of a government-sponsored project to build an A-tanker. Last year, Maritime asked for funds to convert a 22,500-ton conventional tanker to nuclear propulsion, but was turned down by the Budget Bureau (PW—May30'58,p38).

Maritime came away from that defeat with the intention of asking this session of Congress for money to construct a 20,000-ton submarine atomic tanker.

But last week, the Commerce Dept., Maritime's parent agency, announced that it has decided to hold up its plans for the atomic tanker. It said that its decision was based on budget considerations, and it made no suggestion as to when the project might be reactivated.

# What's New
## IN TRANSPORTATION

**The world's largest tanker, the 104,500-ton "Universe Apollo," has just begun its maiden voyage**—from Tokuyama, Japan, not far from where it was built (PW—Jan.30'59,p40), to Kuwait.

The Apollo is the first of five 104,500-tonners planned by D. K. Ludwig (PW—Oct.11'57,p84). It will take crude from Kuwait Oil Co. at Mina-al-Ahmadi for delivery at the Tokuyama refinery of Idemitsu Kosan Co., Ltd. The ship will sail under the Liberian flag.

The Apollo is too big to negotiate either the Panama Canal or the Suez Canal loaded. It is also too big for most world ports, including all U.S. ports.

•

**Federal Power Commission hearings on Transwestern Pipeline Co.'s proposed West Texas-to-California gas transmission system will resume Mar. 10.**

Reopening of the commission hearings was formerly set for Apr. 13. But the date was advanced when a Transwestern motion established the "urgency of speedy commission action."

The $190-million system would tap West Texas, Oklahoma, and Four Corners gas production for transmission to West Coast consumers.

•

**The Annual Pipe Line Conference of the American Petroleum Institute's Division of Transportation will be held in Pittsburgh May 13-15.**

Several papers will be presented at the meeting. Tentative subjects include two-phase flow; internal pipeline surveys; spheroid separation of products; and handling light hydrocarbons admixed with crudes.

Panel discussions on automation, product metering, offshore pipelines, corrosion, public relations, and construction and maintenance will also be held.

Several field trips to industrial and historical points of interest in western Pennsylvania are also planned.

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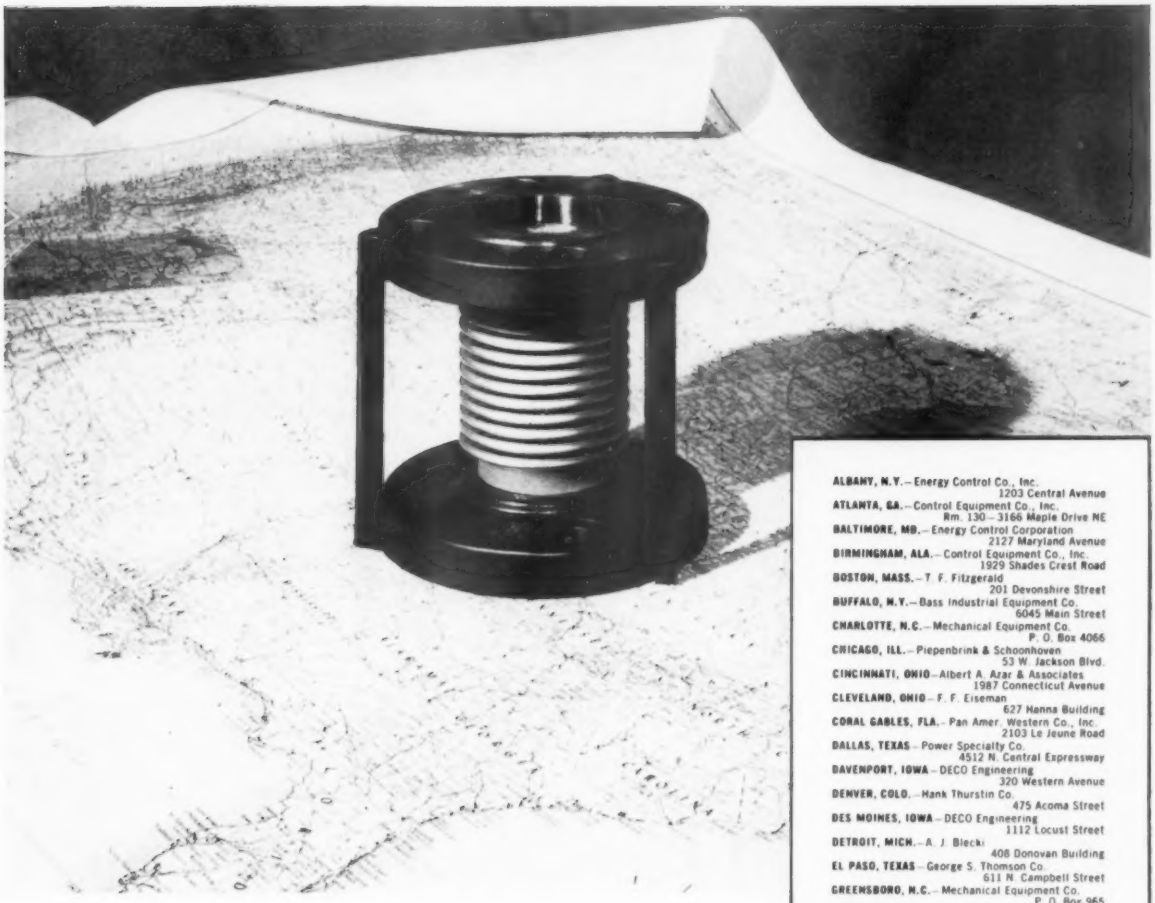
**The American Welding Society will hold its annual technical meeting and exposition in Chicago Apr. 6-9.**

A society spokesman calls the meeting and exposition "the biggest show in our history," with "the newest in welding."



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**Who's Where in Bolivia's Concessions and Contract Areas**

1. Bolivian Gulf Oil Co. (Gulf Oil, Falcon Seaboard, Williams Bros.)—concessions
2. Bolivian Gulf Oil Co.—contract acreage
3. Brazilian treaty acreage
4. Reverted treaty acreage—YPFB
5. Chaco Petroleum S.A. (operator for T.U.L.M. Group)—contract acreage
6. Andes Oil Co. (operator for Pure, Sohio, Signal)—concession
7. Cia Petrolera Boliviana Shell—concessions
8. Bolivian Petroleum Corp. (Drilling & Exploration Co.)—concessions
9. Bolivian American Oil Co. (affiliate of Consolidated Cuban Petroleum)—concessions
10. Cataract Mining Corp.—concession
11. White Eagle International Oil Co. (with Blackwell Oil & Gas and Western Hemisphere Petroleum)—concessions
12. Bolivia California Petroleum Co. (California Standard)—concessions
13. Bolivian Oil Co. S.A. (Fish Engineering affiliate)—contract acreage

# U.S. Firms Will Push Bolivia Oil Hunt

**LA PAZ—The search for new oil in Bolivia will get an extensive push this year from 20 private companies that now hold interests in more than 28-million acres of oil rights** (map).

Last year, with oil output still limited to less than 10,000 b/d produced in the southeast by the government oil company, landlocked Bolivia completed its first seaboard export outlet, a 6,000 b/d pipeline to Chile's Pacific coast.

This year, the search for more oil will be spread farther into new areas by private operators. The roster of participants has been growing gradually since 1956, when a new oil law was passed to draw private capital back into a country that once nationalized foreign oil interests.

Today there are eight groups holding oil rights in the three zones open to direct concessions, and three holding contracts with Yacimientos Petroliferos Fiscales Bolivianos, the government oil company, in the producing area that is reserved to it by the oil law.

**Wildcatting in the YPFB Zone will be stepped up this year by Bolivian Gulf Oil Co. and the two other private operators with contract acreage there.**

Bolivian Gulf, the first and most active of the companies that have moved into Bolivia, is preparing to spud the third wildcat on its 3.7-million-acre contract area. The company is owned 87% by Gulf Oil Corp., 7% by Falcon Seaboard Drilling Co., and 6% by Williams Bros.

The new wildcat will be carried to about 12,500 ft. on a seismic structure at Yoay, about 12½ mi. northeast of the company's first wildcat. That test, No. 1 Mandeyapecua, showed some wet gas and was suspended at 11,623 ft. at a site about 15½ mi. due east of Boyuibe. The company's second wildcat, No. 2 Mandeyapecua, was abandoned at 6,500 ft., about ¾ mi. east-northeast of No. 1.

Bolivian Gulf, which is using its own National 130 rig on the tract, also plans to put a light rig on its acreage before the year is out. The company is now shifting to contract drilling in Bolivia, with Parker International Drilling Co. slated to do the drilling in the YPFB Zone.

**Chaco Petroleum S.A., operator for the four-company T.U.L.M. Group, is studying locations for more tests on its 900,000-acre contract area.**

The company is currently drilling below 8,290 ft. in No. 2 Agua Salada, its third test since starting exploration in 1957, when it took over the former Glenn McCarthy rights.

The No. 2 Agua Salada is projected for 11,200 ft. to test the Tupambi and Devonian sands. The No. 1 Agua Salada was drilled to 9,532 ft. and plugged back to test sands at 7,100 ft. The group's first wildcat, No. 5 Los Monos, on another structure, was abandoned.

The company has done geological work on other structures, but has not decided yet when and where the subsequent tests will be made.

Chaco is a wholly-owned subsidiary of Tennessee Gas Transmission Co., biggest shareholder in the venture. The other participants are Union Oil & Gas Corp. of Louisiana, Lion Oil Co., and Murphy Corp.

**Bolivian Oil Co., an affiliate of Fish Engineering (Corp.) will start the first of two deep tests this spring on its 108,000-acre Madrejones contract area** along the Argentine border.

The tests, slated for about 13,000

ft., will be drilled by Big Chief Drilling Co., of Oklahoma City, the contractor.

**The first wildcatting outside the YPFB Zone will be started this year by Bolivian Gulf in its Zone 1 concessions,** which total 1,235,500 acres.

The company will shortly bring in another National 130 rig of its own for operations in the Santa Cruz area. Drilling will be done by Falcon Seaboard's Venezuelan subsidiary, D & D Construction & Drilling Co.

At the same time, Bolivian Gulf will continue seismic work this year on all of its holdings, which total 8.6-million acres, including concessions in Zones 1 and 2 as well as the contract area. It now has two seismic parties in the field: one from Nance, Inc., of Tulsa, is in Zone 1; one from Geophysical Service Inc. is in the contract area. Aerial photography and gravity work have been completed.

**Exploration on other, newer concessions is less advanced, but the pace will be stepped up by other companies this year.**

• Cia. Petrolera Boliviana Shell plans to increase operations on its concessions, totaling 7,455,000 acres in Zones 1, 2, and 3b. Last year Shell completed some 23,000 sq. mi. of aerial photography, 2,400 sq. mi. of gravimetric surveys, and 700 sq. mi. of seismic work.

• Pure Oil Co.'s Andes Oil Co., operator for its joint account with Standard Oil Co. (Ohio) and Signal Oil & Gas Co., plans a surface geology survey, with emphasis on the mountains along the western edge of its 1,235,000-acre concession in Zone 1. Depending on results, this will be followed by seismic work. Last year Andes carried out a gravimetric and magnetometer program and is now concluding study of its findings.

• Standard Oil Co. of California's Bolivia California Petroleum Co., recently established in Bolivia, is now in initial stages of preparing for exploration of concessions totaling 4,935,000 acres in Zones 1 and 2. It recently reached agreement with Shell for joint exploration of their respective concessions.

• Drilling & Exploration Co.'s Bolivian Petroleum Corp. is carrying out preliminary geological surveys of its 1,235,000-acre concession in Zone 1. Atlantic Refining Co. recently acquired a year's option to drill one exploratory well for an 80% interest in the concession (PW—Jan.16'59,p68).

• Cataract Mining Corp. plans to start seismic work this spring on its 300,000-acre Zone 1 concession.

• White Eagle International Oil Co. is awaiting results of aerial work now being completed by Acromagnetic Surveys, Ltd., before planning topographic and geophysical work on Zone 1 and 2 concessions, totaling 2.2-million acres. White Eagle, a Tulsa firm, holds the grants jointly with Blackwell Oil & Gas Co. and Western Hemisphere Petroleum Corp., also of Tulsa.

• Bolivian American Oil Co., which has completed preliminary surveys, is preparing to start a four-year exploration program on its Zones 1 and 2 concessions, which total 1,170,000 acres. The company, which has applications pending for a like amount of acreage in Zones 1, 2, and 3, is owned largely by private Bolivian interests. It was organized by the U.S.-owned Consolidated Cuban Petroleum Corp., which holds 16% interest in it.

**Private Brazilian interests—perhaps backed by U.S. companies—may move into new acreage some time this year.**

Brazil has until September to take up the 3.7-million acres it was assigned in a former Bolivia-Brazil treaty area. (The other half of the treaty area reverted to YPFB.)

Brazil's Development Bank has approved proposals of three U.S.-backed Brazilian groups (PW—Jan.30'59, p38). Right now, however, the deals are caught on the horns of political controversy, with Brazil still apparently far from ready to present them for Bolivia's approval.

**Meanwhile, the government oil company is starting a five-year program of its own, aimed at increasing production to 35,000 b/d** and stabilizing it at that level for 15 years to permit exports of 25,000 b/d.

Last year YPFB's output dropped slightly to 9,388 b/d, from 9,795 b/d in 1957. About 3,300 b/d were exported to Argentina. YPFB also exported gasoline to Chile, Brazil, and Paraguay, and kerosine to Brazil.

The company hopes to establish 200-million bbl. of recoverable reserves under the program. Under its immediate plans, it will:

• Double the present output of the Camiri district, with more development drilling slated there, as well as at Camatindi, Sanandita, and Bermejo.

• Explore and develop the new Rio Salado, Achiralito, Ipaguazu, Carandaiti, Capirenda, and Ibomiranti structures.

• Execute aerial, geological, and geophysical work in new areas—including the "reverted" treaty area. YPFB will also undertake exploratory drilling there, with policy for the area to be worked out later.

• Let more drilling contracts. YPFB already has one contract with Big Chief Drilling Co., which will start deep drilling shortly at Laguna Seca.

• Finance construction of the second phase of the pipeline from Camiri to the Pacific coast, to boost its capacity to 50,000 b/d when sufficient reserves and production have been developed. A revised route to shorten the section from Camiri to Sucre is now under study.

**YPFB is looking for foreign loans, as well as direct aid from the Bolivian government, to finance its plans. It has also received proposals for new contract operations and for credits from several companies,** including Carl M. Loeb, Rhoades & Co., Petrofina, and Italy's Ente Nazionale Idrocarburi.

## U.S. Firms Lead Argentine Bidders

**BUENOS AIRES—Argentina's January call for drilling bids for 4,557 wells was apparently more than covered by last week's deadline: 27 offers were received, at least 17 of them from U.S. companies.**

Each was to cover drilling of 200 to 300 wells over six years on the southern flank of the Comodoro Rivadavia oil area, where the state oil company also plans to drill another 3,327 itself.

Terms of the offers—which will be payable either entirely in pesos or partly in foreign exchange—have not yet been disclosed.

The 16 U.S. bidders identified last week are:

Southeastern Drilling Corp., Dallas; Storm Drilling Co., New Orleans; C. J. Simpson Drilling Co., Olean, N.Y.; Brantly Drilling Co. International, Midland, Tex., Ben D. Marks, Corpus Christi, Tex., jointly with Falco Drilling Co., Alice, Texas; C. G. Glasscock, Corpus Christi; An-Son Drilling Co., Oklahoma City; Arrow Drilling Co., Tulsa; K. L. Kellogg & Sons, Compton, Calif.; Crispin Co., Houston; Pan American Land & Oil Royalty Co., Dallas, jointly with Canamerican Drilling, Ltd., Calgary; Parker International Drilling Co., Tulsa; Loffland Bros., Tulsa; Kerr-McGee Oil Industries Inc., Oklahoma City; Delta Drilling Co., Tyler, Tex.; Camdrill International, Los Angeles, and Universal Export Corp., New York.

**Italy's state oil company was among the bidders, along with three French and two Venezuelan drilling contractors,** two Argentine groups, and two Panama-based firms.

# What's New / AROUND THE WORLD

**IRAN—National Iranian Oil Co. last week announced its first "commercial" discovery in central Iran—an 80 b/d well at Saradjeh,** southeast of Teheran.

The well, No. 2 Saradjeh, found 46-gravity, sulfur-free oil at around 8,000 ft. It is apparently still being tested.

This is the second wildcat drilled on a large anticline 30 mi. south-southeast of Alborz, in the Qum area, where NIOC's spectacular No. 5 Alborz raised great hopes in 1956. That wildcat blew wild for three months at an estimated rate of 80,000-100,000 b/d before it was capped. No oil has been found so far in subsequent tests at Alborz.

•

**SPAIN—Gulf Oil, Jersey Standard, and Shell may be among those to apply for oil rights this spring under Spain's new 50-50 oil law** (PW—Jan.16'59,p66).

According to reports from Madrid, Gulf is showing interest in Spanish Guinea, Jersey Standard in the Spanish Sahara, and Shell in mainland Spain.

•

**USSR—The Russians are reported interested in exporting natural gas to Finland and possibly Sweden.**

According to reports reaching West Germany, the Russians are suggesting construction of a gas pipeline to Finland. They are also said to be considering extending such a line to Sweden via Gotland Island—a proposal that reportedly interests the Swedish as a means of reducing their need for imported coal.

•

**TURKEY—Socony Mobil is now drilling below 6,470 ft. in its first Turkish wildcat.** The No. 1 Khuransa is in the Adena Basin, in the Iskenderun area.

•

**VENEZUELA—A new U.S.-Venezuelan firm has been set up to design and build oil, chemical, and petrochemical facilities.** It's the first in its field in Venezuela to have local capital participation.

Named Vicaprocon S.A., the company is owned jointly by Procon International, U.S. engineering firm, and Shevica, a Caracas construction company formed earlier by a Venezuelan firm and Shelby Construction Co., of the U.S.

•

**WEST GERMANY—Quotas for oil imports from Russia in 1959 remain unchanged under a new agreement concluded last week:** 700,000 tons of crude, 300,000 tons of fuel oil, and 120,000 tons of diesel oil.

The agreement covers the second year of a four-year trade pact running until the end of 1961.

•

**SOMALIA—Sinclair Somal is drilling below 4,000 ft. in its fourth test.** The No. 1 Merca is over 300 mi. northwest of the company's third test, the No. 1 Maria Ascia, which was abandoned last year at 13,500 ft. (PW—Oct.3'58,p71). The two previous tests were also dry holes.

Sinclair Somal is a joint venture of Sinclair Oil Corp. and the Conorada group, which hold rights to some 66,000 sq. mi.

Meanwhile, the Italian state oil company, Agip, is now drilling its third test after two dry holes.

•

**VENEZUELA—An offset to the first of Phillips Petroleum's two discovery wells on Lake Maracaibo Block 10 flowed at the rate of 5,592 b/d** in initial tests, the company announced last week. The oil is 25½-gravity.

The well, LSG 0-6, is 1,900 ft. southwest of the 4,080 b/d discovery well in the northwest corner of the midlake block. Development drilling is also under way 9 mi. to the east, offsetting the second discovery on the block, which Phillips shares with five partners (PW—Dec.12'58,p48).

•

**WEST GERMANY—Esso AG may be the second company to plan a new refinery in south Germany—if and when the proposed $120-million pipeline from the Mediterranean materializes.**

Esso is negotiating for a site at Karlsruhe, to which the Marseilles-Strasbourg line would be extended. If the plan ever jells, Esso would probably build a plant with at least 60,000 b/d capacity. Deutsche Erdoel, an independent German firm, also proposes building a 40,000 b/d plant at Karlsruhe.

At present, however, the pipeline proposal is floundering. Gulf Oil has already withdrawn from the group of 19 companies that has had the project under study, and some other major companies also may pull out.

•

**FRANCE—French oil consumption increased 11% last year to 19.5-million metric tons,** not counting 1.5-million tons of bunkers for French ships and another 6.5-million tons for military and refinery use, according to the Comite Professionnel du Petrole.

•

**ARGENTINA—Pan American International last week found oil in its first two tests at Cerro Dragon,** a semiproved area. These are the first tests drilled by a U.S. company under one of the new development contracts.

Details were not disclosed pending completion of the wells. The first of them reportedly flowed at the rate of 473 b/d in the first day of testing.

•

**VENEZUELA—Oil output climbed to a new high of 2,994,838 b/d in January, topping the previous record, in June, 1957,** of 2,968,618 b/d.

The month's average was a gain of about 146,000 b/d over December, with Shell accounting for about 95,000 b/d and Creole 50,000 b/d of the increase.

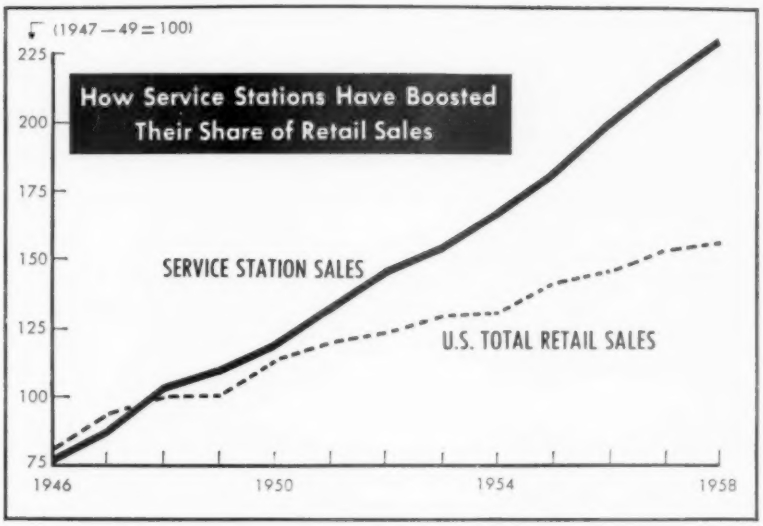
Company averages, according to the Ministry of Mines & Hydrocarbons, were (in b/d): Creole 1,217,079; Shell 914,344; Mene Grande 396,777; Socony 120,679; Richmond 63,276; Sinclair 58,094; Texas 51,924; Mercedes 32,824; Sun 30,689; Superior 29,748; Atlantic 25,304; San Jacinto 21,825; Signal 20,347; Phillips 10,365; Talon 1,509; Caracas 54.

•

**Oil output in key Middle East producing states continued sliding in January, to a total of 4.2-million b/d.** It was still 80,000 b/d above the same month a year ago, however.

The totals, in 000 b/d:

| | Jan. '59 | Jan. '58 | Dec. '58 |
|---|---|---|---|
| Kuwait | 1,404.2 | 1,315.4 | 1,442.7 |
| S. Arabia | 994.0 | 978.4 | 1,034.6 |
| Iran | 829.0 | 842.0 | 822.0 |
| Iraq | 806.6 | 614.4 | 794.7 |
| Qatar | 167.0 | 159.3 | 188.6 |
| Total | 4,200.8 | 3,909.5 | 4,282.6 |




# Sales Growth May Slacken

**Despite record sales last year, gasoline service stations appear to be heading for a period of reduced growth.** The continuous climb in sales since World War II may be brought more in line with retail sales in general. Oil marketers note several factors that are beginning to undermine the expansion of service station sales.

**Sales at gasoline service stations moved upward last year, reaching a monthly average rate of $1.3-billion.** According to the latest Dept. of Commerce figures, this represented a gain of over $50-million compared to the 1957 monthly average.

Toward the end of the year, 1958 monthly sales at service stations were approximately $75-million over comparable 1957 levels. And on a seasonally adjusted basis, sales in the last three months of the year were higher than during any other quarter in history.

The average monthly sales have more than doubled since the 1947-49 period (chart, above).

**Proportionally, gasoline service stations increased their share of the over-all retail market last year from 7.5% to almost 8%.** This recent increase maintains the characteristic climb which began after World War II.

Since 1946, when service stations accounted for 4.9% of the total retail sales in the United States, there has been an almost uninterrupted increase in the portion of the retail dollar received by service stations.

In only two years—1950 and 1955—have service stations failed to grow at a greater rate than the retail market as a whole.

**But gasoline service stations apparently became more vulnerable to the effects of recessions last year than they were in the past.**

Last year's 4½% increase in station sales over 1957 was the smallest since World War II. It compared with an average annual increase in service station sales of more than 8% since 1949.

During earlier recession years—1949 and 1954—gasoline service stations had been able to resist the general stagnation in total retail sales, moving ahead by 7½% and 9%, respectively.

**Oil men see several factors that may be responsible for a further weakening in station sales:**

• **Consumers are not increasing their proportional expenditures on gasoline and oil.** Ever since the third quarter of 1956, these two items have accounted for a steady 3.6% of the average consumer's total budget. Prior to that, the portion spent on gasoline and oil had increased steadily from the level of 2.0% early in 1946.

These figures are based on recent Dept. of Commerce revisions of its estimates of consumer expenditures.

• **Increases in automobile registrations have been losing their momentum.** In 1958, the advance recorded by the Bureau of Public Roads was only an estimated 2%, compared to an annual rate of increase of more than 5% between 1951 and 1957.

• **As a result of these two factors, a third factor emerges: The rise in domestic demand for gasoline has slowed in recent years.** In 1957 and 1958, gasoline demand rose by less than 2% each year. In the previous decade, the average annual increase had been 6.5%.

After reviewing these trends, one marketing research expert looks forward to a continued rise in service station sales (in relation to total retail sales), "but at a much slower rate."

# What's New
## IN MARKETING

**An FTC examiner refused last week to dismiss a complaint charging Sun Oil Co. with price-fixing in Norfolk, Va.**

Examiner Robert L. Piper maintained that there was evidence "which might lead to the conclusion or justify the inference" that Sun Oil's Norfolk consignment plan was not bona fide.

Sun had switched some of its Norfolk dealers to a consignment basis in order to compete with the low prices at a military PX.

•

**Fuel oil price increases in upstate New York are under investigation by the Justice Dept.** According to Victor R. Hansen, head of the antitrust division, the probe will seek to determine whether a price-fixing conspiracy was involved.

•

**Esso Standard is removing voluntary allowances from its posted tank wagon prices for gasoline in price-depressed areas of Long Island, N. Y.**

Esso is also withdrawing voluntary allowances in all other depressed points in New York State where they have been in effect.

•

**The price war in Indianapolis pushed pump postings down another 1¢ last week.** Prices now stand at 3¢ below the new "normal" level, tentatively recognized since last summer.

•

**Magnolia Petroleum Co. will spend more than $5-million on service station expansion in 1959,** nearly double its 1958 expenditure.

## DEPT/Personals

**THOMAS T. CONGER** has been appointed manager of the producing department of Standard-Vacuum Oil Co., with headquarters in White Plains, N. Y. He succeeds **Dwight E. Davis**, who is retiring after 22 years with Stanvac. Conger, currently serving as general manager of Stanvac's producing organization in Pakistan, will assume his new responsibilities in May.

T. T. Conger

C. W. Smith

**CHARLES W. SMITH** has become chief engineer of Esso Research & Engineering Co., Linden, N. J., succeeding **Sam C. Re**, who becomes manager of construction for Esso Petroleum Co., Ltd., London. Smith has been director of Esso Research's employee relations division; he is succeeded by assistant director **Fred Senkowsky, Jr.**

**JACK R. FRASER**, manager of Republic Natural Gas Co., Dallas, has been elected vice-president of that company. At the same time, **James A. Lewis**, president of James A. Lewis Engineering, Inc., and **John W. Rutland, Jr.**, senior partner of Thompson, Knight, Wright & Simmons, Dallas law firm, have been elected directors. Lewis has been active in the petroleum industry since 1935, when he founded Core Laboratories, Inc. Rutland has been counsel for Republic Natural Gas for the past several years.

**J. H. PITTINGER**, formerly North Texas division exploration manager at Wichita Falls, Tex., replaces **E. C. Taber, Jr.**, as area geologist in Tulsa for Shell Oil Co. Taber is beginning a special assignment with Shell Development Co., in Houston. **J. F. Bookout**, district geologist for the Amarillo district, now on special assignment in Shell's head office in New York, will succeed Pittinger in Wichita Falls. **J. C. Threet**, geologist for the Oklahoma division in Oklahoma City, succeeds Bookout at Amarillo At the same time, **R. R. Evans**, temporarily assigned to the Amarillo district, will return to the Oklahoma division, where he will join the special studies section and be in charge of coordinating these studies with operations.

**HOWARD C. PYLE**, president of Monterey Oil Co., Los Angeles, was elected president of the American Institute of Mining, Metallurgical & Petroleum Engineers last week at its national convention in San Francisco. **John S. Bell**, California area manager for Humble Oil & Refining Co., is the new president of AIME's Society of Petroleum Engineers.

**D. L BARRETT**, manager of fuel oil sales for Esso Standard Oil Co., has been elected the first chairman of the National Fueloil Council. New officers of the oil heat promotional organization are: **Robert Gray**, president, **Fred S. Burroughs**, secretary, both for the administrative group; and **Wiley Butler**, Coastal Oil Co., vice-chairman, and **C. E. Kramb**, Gulf Oil Corp., treasurer.

D. L. Barrett

C. B. Wentz

**C. B. WENTZ** is the new director of organization planning for Continental Oil Co., with offices in Houston. He was most recently assistant general manager of Conoco's southern region, in Houston. Wentz joined Conoco in 1938 at Ponca City, Okla. He moved to Houston in 1950 as chief proration engineer, and two years later was promoted to manager of the coordinating and planning department.

**J. H. KIRBY** has been appointed managing director of Shell Tankers, Ltd., succeeding **A. S. C. Hulton**, who assumes another position with the Royal Dutch Shell group. **Alec Logan**, technical director of Shell Tankers since 1955, succeeds Kirby as deputy managing director.

**SAMUEL W. HARRIS** has been named manager of the Wynnewood (Okla.) refinery, and **BERNARD A. PAULSON** manager of the Cleveland (Okla.) refinery, for Kerr-McGee Oil Industries, Inc. **C. E. (Gene) Gessner** has been promoted to general superintendent of Kerr-McGee's natural gasoline division, with offices in Oklahoma City. Harris, with Kerr-McGee since 1949, was most recently maintenance supervisor of the Wynnewood plant. Paulson was formerly chief process engineer at Cleveland, and Gessner was staff assistant engineer at Oklahoma City.

P. J. King, Jr.

T. L. Pelican

**PETER J. KING, JR.**, is the new vice-president for corporate and financial matters, and **THOMAS L. PELICAN** vice-president of engineering, for Colorado Interstate Gas Co., Colorado Springs. **John J. Yeonopolus** is the new treasurer, succeeding **William B. Kice**, who has retired. King, with Colorado Interstate since 1953, was most recently administrative assistant to the president. Pelican, with the company since 1948, has been in charge of the industrial engineering department since 1953; Yeonopolus has been director of budget and rates since 1957.

**L. D. FRASER**, a director of Imperial Oil Ltd., has been elected a director of Trans Mountain Oil Pipe Line Co., Vancouver, B.C. He succeeds **J. K. Jamieson**, president of International Petroleum Co., Ltd., who has resigned from Trans Mountain.

**JAMES D. HELDT** is the new executive vice-president of Nebo Oil Co., Dallas. He has been with Nebo since 1946, serving as secretary, treasurer, and vice-president.

**LON C. HILL**, chairman of Central Power & Light Co., Corpus Christi, Tex. and **GEORGE MATKIN**, president of the State National Bank, El Paso, Tex., have been elected directors of Delhi-Taylor Oil Corp., Dallas. Hill is also chairman of the First State Bank of Corpus Christi, and president of Southern Mortgage Finance Co., Los Fresnos, Tex. Matkin is also a director of Aztec Oil & Gas Co. **Ben C. Belt**, retired Houston oil man, has resigned as a Delhi-Taylor director.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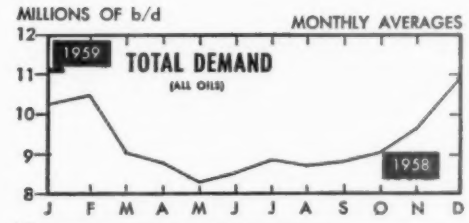
PETROLEUM WEEK'S

# Fingertip Figures

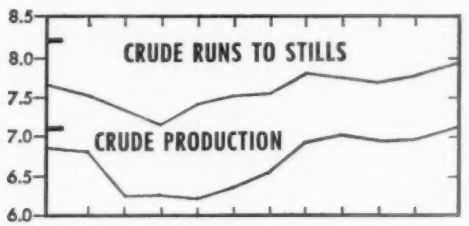



TOTAL DEMAND

| | |
|---|---|
| Latest 4-week average | * |
| Year ago | 10.344 |

DISTILLATE DEMAND

| | |
|---|---|
| Latest 4-week average | * |
| Year ago | 3.449 |

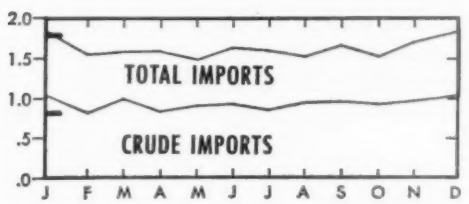



RUNS TO STILLS

| | |
|---|---|
| Latest week | * |
| Previous week | 7.954 |
| Year ago | 7.506 |

CRUDE PRODUCTION

| | |
|---|---|
| Latest week | * |
| Previous week | 7.155 |
| Year ago | 6.808 |

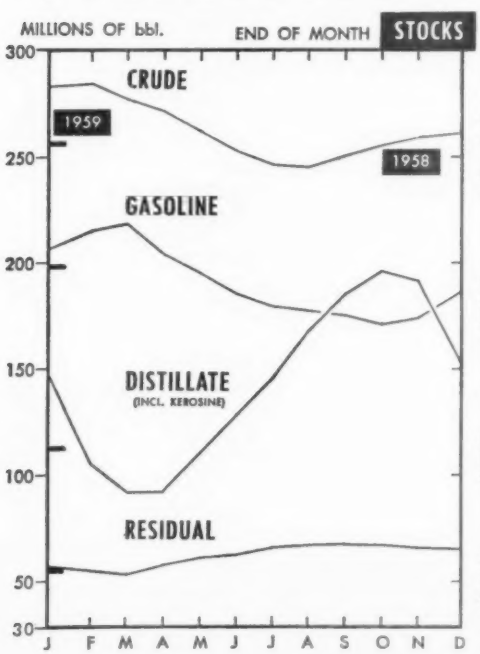



TOTAL IMPORTS

| | |
|---|---|
| Latest week | * |
| Previous week | 1.849 |
| Year ago | 1.081 |

CRUDE IMPORTS

| | |
|---|---|
| Latest week | * |
| Previous week | .735 |
| Year ago | .558 |




CRUDE STOCKS

| | |
|---|---|
| Week-ended 2-14 | 256.0 |
| Previous week | 257.2 |
| Year ago | 284.8 |

GASOLINE

| | |
|---|---|
| Latest week | * |
| Previous week | 200.1 |
| Year ago | 213.7 |

DISTILLATES

| | |
|---|---|
| Latest week | * |
| Previous week | 108.2 |
| Year ago | 116.3 |

RESIDUAL

| | |
|---|---|
| Latest week | * |
| Previous week | 55.6 |
| Year ago | 55.4 |

**Isobutane, which has been in tight supply for several years, is showing its first signs of price weakness—a weakness that may be lasting.**

The demand by refiners for isobutane as a blending component for gasoline kept the material in tight supply for years. And in more recent years, increasing amounts of isobutane have been channeled into petrochemical feedstocks.

**Now, though, more refiners are installing butane isomerization units, enabling them to buy normal butane, priced below isobutane, for processing.**

Also, some refiners are making use of underground storage of butane, which means they can buy at the seasonal low-priced period in the warm months for processing into isobutane as needed.

Additional flexibility is derived from greater use of butane splitters, permitting refiners to buy mixed field butanes (iso and normal), priced below isobutane alone.

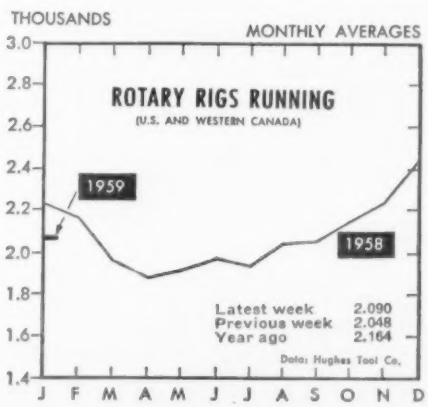
**The result is that isobutane prices have been forced down to near the prevailing level of normal butane.**

Isobutane is available at Mid-Continent field locations at prices ranging from 5.5¢ to 7.5¢ a gal., depending on location, and delivered to the Gulf Coast at about 9.5¢ a gal.

That is close to contract butane and propane prices, though spot field discounts on the latter are becoming available, a traditional event in spring.

* * *

*Due to the observance of Washington's Birthday on Feb. 23, most figures for the week ended Feb. 20 were unavailable at press time.



# The Market Trend

## Venezuelan Crudes Could Topple Again

**You can make a good case for another drop soon in Venezuelan crude oil prices.** See if you go along with it.

**Note, first, that deeper price cuts were made in the Middle East in this month's round of foreign oil adjustments.** Persian Gulf crude were cut 15¢ to 19¢ a bbl. Venezuelan oils were reduced 5¢ to 15¢. Oficina crude of 35-gravity now is listed at $2.90, f.o.b. Puerto La Cruz. Arabian crude of comparable gravity is $1.89, f.o.b. Ras Tanura.

**Note, also, that the ocean freight market is in for another year of depression.** With Venezuelan crudes priced so much higher than Middle East oils, freight rates become crucial factors in reaching markets.

**Here's roughly the break-even ocean freight rates needed to make Venezuelan crude competitive with oils from the Persian Gulf:** To Los Angeles, USMC—7%; New York and Philadelphia, USMC—23%; Rio de Janeiro, USMC+3%; Buenos Aires, USMC+15%; Montevideo, USMC +19%; and London, USMC+75%.

**But actual freight rates range from USMC—50% to —60% on term charters, and down to USMC—70% for spot.** This gives Arabian oil a big edge. Venezuelan crudes have certain "quality differentials" over Middle East crudes. But the advantage on quality is not enough to override the disadvantages on total cost, including freight.

**Cheap rates for ocean tonnage mean that Middle East oils are moving into many world markets that once were enjoyed exclusively by Venezuela.** Last week, two deals were closed that will send Arabian crude oil to Brazil. The East Coast of South America increasingly will be a one-sided battleground. The Canadian market is highly vulnerable. The UK/Continent market is lost.

**If Venezuelan producers are to protect their historic markets and avoid further encroachments from Middle East oils, price reductions are necessary.**

### A Novel Deal On Crude Oil:

A novel crude oil deal was closed by Texaco with Petrobras, the Brazilian oil agency, last week. Texaco will supply Arabian crude to Brazil over a six-year period. Brazil will supply Texaco with Bahia crude over a three-year period.

The rule of thumb for the deal is "three to one." Thus, for the first three years of the supply period, Texaco will sell three barrels in for every two barrels it takes out.

### No. 6 Fuel:

The story that never came out is that early this month a big eastern marketer was seriously considering advancing heavy fuel prices 25¢ a bbl. Nothing was ever said about it, because the decision was reached to leave prices unchanged.

### Black Sea Fuel To New York:

The first cargo of Black Sea residual fuel arrived in New York harbor this week aboard the Punta Spiga. The oil was slated for discharge at the Edgewater (N. J.) Oil Terminal Corp.'s deepwater plant "on a throughput basis." The final receiver of the oil was not disclosed.

# The Market Place AROUND THE WORLD

Prices compiled for PETROLEUM WEEK by Platt's OILGRAM Price Service and National Petroleum News, McGraw-Hill Publications

**All prices as of February 20**

**Bold face type indicates changes from previous week**

## KEY PRICES—REFINED PRODUCTS

(¢ per gal. except dollars per bbl. where $ is shown)

### Western Hemisphere

**U. S. Gulf Coast, cargoes**
- Gasoline, 98 oct prem.....11.75-12.75
- Gasoline, 92 oct reg.....10.5-11.5
- Kerosine.....10.375
- Heating oil, No. 2.....9.875
- Gas oil, 48-52 d.i.....10.125
- Fuel oil, bunker "C".....$2.00-2.10

**Caribbean, cargoes**
- Avgas, Grade 100/130.....16
- Gasoline, 93 oct research prem.....10.75
- Gasoline, 87 oct research reg.....9.875
- Gasoline, 79 oct research.....9.125
- Gasoline, 70-72 oct motor method.....9
- Kerosine.....10.625
- Heating oil, No. 2.....9.875
- Gas oil, 48-52, d.i.....10.125
- Fuel oil, bunker "C".....$2.00

**New York Harbor, barges**
- Kerosine.....11.5
- Heating oil, No. 2.....11
- Fuel oil, No. 6.....$2.37-2.45

**Okla-Group 3, northern shpt., bulk**
- Gasoline, 89 oct reg.....11.5-12.375
- Kerosine.....11-11.25
- Heating oil, No. 2.....10
- Fuel oil, No. 6.....$1.90-2.10

**Chicago, bulk**
- Gasoline, 91 oct reg.....11.5
- Heating oil, No. 2.....10.5-11.85
- Fuel oil, No. 6 high sulfur.....7.65-7.75

**Los Angeles, rack**
- **Gasoline, 88 oct reg.....11.8↓-12.6**
- Diesel fuel, PS 200.....10-11.25
- Light fuel, PS 300.....$2.80
- Heavy fuel, PS 400.....$2.15-2.35

**Natural Gasoline, Grade 26-70**
- FOB Group 3.....4.5
- FOB Breckenridge, Tex.....4

**LP-Gas**
- Propane, Oklahoma (Group 3).....5.5

**Pennsylvania Lubes**
- Bright stock, 25 p.t.....22
- 200 vis. neutral, 25 p.t.....21

**Mid-Continent Lubes, Tulsa basis**
- Bright stock, solvent 95 v.i.....23-24
- Neutral, solvent, 200-210 vis.....19.5-20.5

**Gulf Coast Lubes**
- Bright stock, solvent, 95 v.i.....24
- Neutral, solvent, 200 vis.....20.5

### Eastern Hemisphere

**Singapore (Pulau Bukom), cargoes**
- Avgas, grade 100/130.....17.25
- Gasoline, 79 oct research.....10
- Kerosine.....10.75
- Gas oil, 48 d.i. minimum.....10.5

## KEY PRICES—CRUDE OIL

(2¢ differential per deg. of grav. applies except as noted)

### Western Hemisphere

**United States (at the well)**
- Mid-Continent, 36.0-36.9.....$2.77-3.00
- North Dakota, 36.0-36.9.....2.62-2.87
- Texas:
  - Gulf Coast, low cold test, 26.0-26.9.....3.50
  - Gulf Coast, Upper & Lower, 26.0-26.9.....2.92-3.22
  - West Texas, sweet, 36.0-36.9.....3.00
  - West Texas, N. M., inter., 36.0-36.9.....2.93
  - West Texas, N. M., sour, 32.0-32.9.....2.71
  - East Texas, flat.....3.25
  - Mirando, 28.0-28.9.....3.31
- Illinois Basin, flat.....3.00
- Pennsylvania Grade, Bradford dist., flat.....4.05
- California, Signal Hill, 21.0-21.9.....2.50†
- North Louisiana-Arkansas, 36.0-36.9.....2.77-3.02
- Wyoming, sweet, 36.0-36.9.....2.90-3.00
- Wyoming, sour, 32.0-32.9.....2.71

**Canada (flat prices, at the well)**
- Acheson-Stony Plain (Alta.).....$2.61
- Leduc-Woodbend (Alta.).....2.67
- Redwater (Alta.).....2.56
- Daly (Man.).....2.38
- Smiley (Sask.).....2.33

**Venezuela (Cargoes, FOB lifting port designated)**
- Cumarebo, 48.0-48.9, Tucupido.....$3.51
- San Joaquin, 41.0-41.9, Puerto la Cruz.....3.25
- **Oficina, 35.0-35.9, Puerto la Cruz.....2.88-2.90↓**
- Tia Juana, Medium, 26.0-26.9, Amuay.....2.40
- **Bachaquero, flat, Las Piedras.....1.78-1.90↓**
- Tarra, 38.0-38.9, San Lorenzo.....2.93
- Lagunillas Heavy, flat, Cardon.....2.10

†*Differential per deg. of grav. varies.*

### Eastern Hemisphere

**Middle East, Persian Gulf (Cargoes, FOB lifting port)**
- **Arabia, 34.0-34.9, Ras Tanura.....$1.89-1.90↓**
- **Safaniya, 27.0-27.9, Ras Tanura.....1.50↓**
- Iran, 34.0-34.9, Bandar Mashur.....1.86-2.04
- Iran, 34.0-34.9, Abadan.....1.81-1.99
- Iraq, 35.0-35.9, Fao.....1.80-1.98
- Kuwait, 31.0-31.9, Mina-al-Ahmadi.....1.67-1.85
- Qatar, 41.0-41.9, Umm Said.....2.05-2.23
- Neutral Zone, Burghan, 23.5-24.4, Mina Saud...1.61
- N. Zone, Eocene-Ratawi, 20.5-21.4, Mina Saud...1.43

**Middle East, Eastern Mediterranean**
- **Arabian, 36.0-36.9, Sidon.....$2.27↓**
- Iraqi, 36.0-36.9, Tripoli, Banias.....2.31-2.49

**Far East, Cargoes, FOB Lutong, Sarawak**
- Seria Light, 37-38.....$2.75

## KEY TANKER RATES

(Last paid, per long ton, single voyage)

**U.S. Gulf-New York, clean..(USMC —5%) $2.71↓**
**U.S. Gulf-New York, dirty....(USMC Flat) $2.85↓**
**NWI-USNH, dirty.....(USMC —52½%) $1.28↑**
NWI-UK/Cont., dirty.....(Scale —42½%) 18/8*
Per. Gulf-UK/Cont., dirty.....(Scale —52½%) 29/4*
Persian Gulf-USNH, dirty.....(USMC —70%) $3.81

**Sterling.*

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## PETROLEUM WEEK REPRESENTATIVES


Atlanta 3 — Douglas C. Billian, 1301 Rhodes-Haverty Bldg., Jackson 3-6951

Boston 6 — Donald R. Thompson, 350 Park Square Bldg., Hubbard 2-7160

Chicago 11 — Edward A. Callahan Jr., 520 North Michigan Avenue, Mohawk 4-5800

Cleveland 15 — J. E. MacArthur, 1164 Illuminating Bldg., 55 Public Square, Superior 1-7000

Denver 2 — J. W. Patten, Mile High Center, 1740 Broadway, Alpine 5-2981

Houston 25 — D. O. Hanson, 724 Prudential Bldg., Jackson 6-1281

Los Angeles 17 — Peter S. Carberry, 1125 W. Sixth St., Huntley 2-5450

New York 36 — Donald R. Thompson, 500 Fifth Ave., Oxford 5-5959

Philadelphia 3 — W. A. Potter, 6 Penn Center Plaza, Locust 8-4330

San Francisco 4 — William C. Woolston, 68 Post Street, Douglas 2-4600

Tulsa 3 — J. A. Hartley, 909 Enterprise Bldg., 522 South Boston, Gibson 7-5594

England, London E. C. 4 — E. E. Schirmer, McGraw-Hill Co., Ltd., 95 Farrington St.


# DEPT/Service & Equipment Companies

**DEAN WALLING** has been elected president of Western Geophysical Co., Los Angeles, succeeding **Henry Salvatori,** who becomes chairman of the board. Walling was most recently executive vice-president and general manager of the exploration firm.

J. LaBarbera

D. Walling

**JOSEPH LaBARBERA** is the new vice-president of manufacturing for J. B. Beaird Co., Shreveport. LaBarbera joined Beaird in 1955 as assistant plant superintendent, and was most recently manager of production. In his new position, LaBarbera will be responsible for manufacturing operations at the company's three plants, in Shreveport, La., Clinton, Ohio, and Stockton, Calif.

**ROBERT J. RIGGS, JR.,** has been named manager of the seismic reference service division for Century Geophysical Corp., Tulsa. Seismic reference service was recently separated from the domestic service division. Before joining Century, Riggs was associated with Carter Oil Co., and headed his own company, the Oklahoma Log Exchange.

**JONES & LAUGHLIN SUPPLY DIVISION** has appointed six recent graduates of its sales training program to field sales positions. The new salesmen and their headquarters are: **Jack H. Rankin,** Kermit, Tex.; **John W. Snyder,** Alice, Tex.; **Gordon N. Jones,** Williston, N. D.; **Gary N. Griffiths,** Odessa, Tex.; **Larry F. Ransdell,** Oklahoma City; and **Jerre B. Williams,** El Dorado, Ark.

**R. A. LAUDUCCI** has joined Orbit Valve Co., Tulsa, as chief engineer. He was formerly coordinator of planning for all engineering projects of Midwestern Instruments, Inc., Tulsa.

**WILLIAM S. COULTER** is the new advertising manager of the Girdler Process Equipment Division of Chemetron Corp., Louisville, Ky. Coulter has been with the company four years, first as an advertising copy writer, and later as advertising coordinator.

**D. E. O'CONNOR** and **T. J. MERRITT** have joined the engineering department of Commonwealth Services Inc., at Houston. O'Connor will act as chief engineer of the Houston office, and Merritt will be responsible for industrial engineering. O'Connor was most recently chief engineer in the engine division of Clinton Engines Corp., Clinton, Mich., and Merritt was machine tool division general manager for the same company.

**HENRY S. EVANS** is the new advertising manager of Hydromatics, Inc., Livington, N.J. He was formerly advertising manager of Potter Aeronautical Corp. In addition to his responsibilities as advertising manager, Evans will be responsible for promoting the application of Hydromatics' Flo-Ball valves in the petroleum and petrochemicals industries.

**FRANCIS CABELL BROWN** has been elected a director of ACF Industries, Inc. Brown is president and chairman of Schering Corp., New Jersey pharmaceutical manufacturing firm.

**O. A. HICKS** moves to Long Beach, Calif., as assistant manager of the Pacific Coast area for the Baroid

A. J. Olson

P. M. Davis

C. W. Gwaltney

**A. J. OLSON** has been promoted to chief application engineer in Houston, for Continental-Emsco Co. **P. M. DAVIS** has been appointed sales engineer-drilling, structure-masts, at the general offices in Dallas, and **C. W. GWALTNEY,** senior design engineer at the company's Houston manufacturing plant. Olson was formerly chief engineer in the sales distribution division. Davis, with Continental-Emsco since 1953, was most recently a mast sales specialist.

Division of National Lead Co. He was formerly superintendent of Baroid's drilling mud district at Oklahoma City. **Hubert Sanchez** becomes superintendent of the Southern California district, with headquarters at Long Beach. He was formerly Baroid's store manager there.

**WILLIAM L. TREADWAY, JR.,** has been elected vice-president of Southern Marine & Aviation Underwriters, Inc., New Orleans. Treadway, a trained engineer, formerly traveled in the South for fire and casualty insurance companies as state agent and field representative. Southern Marine is a surplus line office serving agents and brokers; its specialty is onshore and offshore oil insurance.

W. L. Treadway, Jr. L. O. Calkins

**L. O. CALKINS** has been appointed western area sales manager for Fluor Corp., Ltd., Los Angeles. He will be responsible for sales in the Rocky Mountain and Pacific Coast states. Calkins, with Fluor since 1942, was most recently district sales manager for the Pacific Coast area, with headquarters in Los Angeles. Before that time, Calkins was district sales manager for the Rocky Mountain area, with headquarters in Denver.

**SEYMOUR DRIBBEN,** vice-president of the Chemical-Corn Exchange Bank, New York, has been elected a director of Cummins Engine Co., Columbus, Ind.

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| Hamilton | 3 | 68SA | 400 | 6 | 900 |
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# The Outlook: Cautions Optimism

THE DOMESTIC INDUSTRY is moving well along the road to recovery from the depressed conditions that have prevailed for nearly two years. There is general agreement on that for good reasons:

- Over-all, stocks are in their best position in years.
- Domestic demand, which hit a record 10.9-million b/d in January, is expected to average 9.5-million b/d for all of 1959, up 5% over last year.
- Domestic crude output that will be required is estimated at an average of 7.3-million b/d for the year, a 9% gain over 1958. It is also expected that gas liquids output will run 875,000 b/d.
- And the chances look good for a modest increase in drilling.

All in all, the over-all prospects are bright—much brighter in fact than at the end of 1958, when some optimistic forecasts for 1959 were made.

OIL CAN BECOME TOO OPTIMISTIC, however, as a glance at past trends will show. The highly seasonal nature of the demand pattern is usually overlooked. The chances are that demand by May will be about 2-million b/d less than the January rate, and that it will continue at the lower level at least until fall.

Also, refiners as a group overlook the fact that adjustments in product yields can make up product deficits far better in the long run than sharp hikes in throughput rates.

The present gasoline situation is a prime example. Runs were hiked to meet a high demand for heating oils, with the result that gasoline stocks mounted unnecessarily. And despite a good demand—6% over last year—a gasoline surplus faces the industry. Stocks already are at a higher level than the industry says is desirable for Apr. 1—the start of the big gasoline consuming season.

Oil's optimism should be tempered with a little caution, lest the industry revert to its surplus position of the spring of 1957.

# How to Start Nationwide Price Wars

A GASOLINE "PRICE WAR" WAS STARTED by Pure Oil Co. in Birmingham in 1955 when it reduced prices to dealers to meet competition from private-brand sellers, a Federal Trade Commission examiner ruled last week. His order, subject to appeal to the full commission and to the courts, would forbid Pure from reducing gasoline prices in any market unless it "proportionately reduces prices everywhere."

Following such a course, a company would presumably start price wars everywhere if its new price was below competing sellers. The result would obviously spell disaster for the oil industry.

## PURPOSE AND TRADITION!

These are the key factors that make available the kind of *service* that has symbolized HALLIBURTON since its beginning.

When well site requirements exist, anywhere, anytime, and under almost any climatic condition, the men that answer your call, do so, with dedication to a basic principle, "We'll get there somehow safely."

This is the heart of HALLIBURTON.

People with Purpose, who believe in the traditional wisdom of *CUSTOMER SERVICE*.

**HALLIBURTON** OIL WELL CEMENTING COMPANY DUNCAN, OKLAHOMA

# 50 years of Leadership

FIRST IN ROCK BIT RESEARCH !

FIRST IN ROCK BIT DEVELOPMENT !

FIRST IN SERVICE TO THE DRILLING INDUSTRY !

**HUGHES TOOL COMPANY**

50TH ANNIVERSARY YEAR 1909 – 1959